S. HRG. 101-1211

ENDANGERED SPECIES PETITIONS ON COLUMBIA AND SNAKE RIVERS

JOINT HEARING

BEFORE THE

SUBCOMMITTEE ON ENERGY AND WATER DEVELOPMENT

OF THE

COMMITTEE ON APPROPRIATIONS
U.S. SENATE

AND THE

COMMITTEE ON SMALL BUSINESS
U.S. HOUSE OF REPRESENTATIVES

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CONTENTS

SATURDAY, JUNE 30, 1990

	Page
Opening statement of Senator Hatfield	1
Prepared statement of Senator Hatfield	6
Opening statement of Representative Ron Wyden	9
Prepared statement of Representative Ron Wyden	10
Statement of Representative Jolene Unsoeld	10
Discussion paper on Mitchell Act hatcheries	13
Statement of Rolland A. Schmitten, Director, Northwest Region, National Marine Service	65
Statement of David Yaden, director, Oregon Department of Energy, representing Neil Goldschmidt, Governor of Oregon	83
Prepared statement of Gov. Neil Goldschmidt of Oregon	86
Statement of Dan Silver, aide to Governor, representing Gov. Booth Gardner of Washington	91
Prepared statement of Gov. Booth Gardner of Washington	92
Statement of Andrew Brunelle, special assistant, representing Gov. Cecil D. Andrus of Idaho	93
Prepared statement of Gov. Cecil D. Andrus of Idaho	96
Statement of Gen. Pat Stevens, Division Engineer, North Pacific Division, U.S. Army Corps of Engineers	107
Statement of Jim Jura, Administrator, Bonneville Power Administration	112
Statement of John W. Keys III, Regional Director, Pacific Northwest Region, Burea of Reclamation	120
Statement of Ted Strong, executive director, Columbia River Intertribal Fish Commission	125
Statement of Levi George, chairman, Yakima Indian Nation Federal Council	131
Statement of Angus Duncan, member, Northwest Power Planning Council	132
Statement of Dale Pearson, Oregon Trout	169
Statement of Ed Chaney, director, Northwest Information Resources Center	170
Statement of Al Wright, executive director, Pacific Northwest Utilities Conference Committee	177
Statement of Glenn Vanselow, executive director, Pacific Northwest Waterways Association	184
Statement of John Rosholt, attorney, Nelson & Rosholt Law Offices, Twin Falls, ID	186

ENDANGERED SPECIES PETITIONS ON COLUMBIA AND SNAKE RIVERS

SATURDAY, JUNE 30, 1990

U.S. SENATE,
SUBCOMMITTEE ON ENERGY AND WATER DEVELOPMENT,
COMMITTEE ON APPROPRIATIONS, U.S. SENATE; COMMITTEE ON SMALL BUSINESS, U.S. HOUSE OF REPRESENTATIVES.

Portland, OR.

The subcommittee met at 9:05 a.m., at the Portland City Council chambers of city hall, jointly chaired by Hon. Mark O. Hatfield (Senate Committee on Appropriations) and Representative Ron Wyden (House Committee on Small Business).

Present: Senator Hatfield and Representatives Wyden and Unsoeld.

NONDEPARTMENTAL WITNESSES

OPENING STATEMENT OF SENATOR HATFIELD

Senator HATFIELD. This joint hearing, under the auspices of the Senate Appropriations Committee and the Committee of Small Business of the House of Representatives, has been convened to examine the declining number of wild salmon runs in the Columbia River basin. I am particularly pleased to share the gavel this morning with Congressman Ron Wyden of Oregon with whom I have a commitment to maintaining both the environmental and economic health of this State and this region. We are doubly honored this morning to welcome also a neighbor from across the river in Washington representing the Third District, Congresswoman Jolene Unsoeld, Jolene Fisher-Unsoeld. As many of you who have known the family will know, you can see that she is part of that family just by looking at her. We are very pleased to have you here this morning and Congressman Wyden, and look forward to hearing your opening remarks.

Let me suggest at the outset that we do not attempt to supersede the Endangered Species Act process. I just want to say that right up front to make certain that no one feels this hearing or the outcome of this hearing will in anyway supersede that process. That process is on track and that process will proceed. But we do want to make sure that we are upholding our responsibilities within the region. I need not cite a long history to indicate we have Federal agencies, State agencies, and regional agencies that are committed to the preservation, conservation, and wise management of our re-

sources, including the fisheries. So we have a responsibility in the region.

I think it is impossible to live in Oregon or Washington or anywhere else in the West and not know about the Endangered Species Act. I believe that by the last count, about 197 candidates are in the endangered species process or being nominated for that process across this country. The U.S. Fish and Wildlife Service's decision to list the northern spotted owl as a threatened species under the act last week continues to send shock waves throughout Oregon, Washington, and northern California, and now Time magazine and other national media have made this matter a focus of attention throughout the country. As we attempt to develop future forest management strategies consistent with that listing, we now face another potential listing decision, and this time of a number of wild salmon runs in the Columbia and Snake Rivers.

FIVE LISTING PETITIONS RECEIVED

The National Marine Fisheries Service already has received listing petitions on at least five species. And the clock is ticking, ticking toward a time 2 years from now when the Secretary of Commerce may well decide that the salmon runs in question are indeed threatened or endangered. Those runs include the Snake River sockeye salmon, the lower Columbia coho, and the Snake River spring, summer, and fall chinook salmon. It is entirely possible that listing petitions will be filed on more than a dozen additional runs before this year is over, and then the clock will begin ticking on them as well.

I have no intention of turning this hearing into a rhetorical scarefest, but I want to be very direct about what lies before us. A decision to list even one of those salmon runs as threatened or endangered could send an economic and social tidal wave throughout this region. Hydroelectric power generation, irrigation, commercial and recreational fishing, tribal fishing, navigation, dredging, timber production, and agricultural, among other interests, all could be affected. We cannot take this possibility lightly and we must not shrink from our responsibilities.

Now we ask, what are those responsibilities? Clearly one responsibility is to provide whatever support we can to the National Marine Fisheries Service as it carries out its legal obligations under the Endangered Species Act. The process mandated by that act depends on hard facts, on complete scientific data; that and that alone. No matter what our various interests, no matter what our own agenda, none of us should get in the way of that process. Doing so would only trap us in the same political and legal morass of charge and countercharge which has become a hallmark of the spotted owl debate, a lose/lose proposition from everyone's standpoint: no win.

But we have an additional responsibility. That responsibility, as it has been, is to develop sound management strategies for the Columbia River basin and its resources. I am not a scientist, but it does not take a scientist to realize that some of those runs are in serious trouble. When it was released earlier this month, the initial report I requested from the National Marine Fisheries Service and

the Oregon Department of Fish and Wildlife underscored a simple fact: the number of salmon in certain wild runs are alarmingly low.

The Secretary of Commerce will make the listing decision, but it should not take a listing under the Endangered Species Act to point out the obvious: our current management strategies are not working, at least not completely. Something needs to be done sooner rather than later.

So as I said at the outset I am not suggesting we attempt to supersede the Endangered Species Act process, but I am suggesting that because we live here, we have a special responsibility. The Columbia River basin is a diverse and precious resource, and we are its stewards.

Throughout my service as Governor of Oregon and as U.S. Senator for this State, I have taken great pride in our management of the Columbia River, one of the world's great river systems. Although there have always been differences of opinion on which of the many river uses should dominate, there is general agreement on one point: the Columbia is one of the most productive and best managed river systems in the United States. In short, we have taken our stewardship responsibilities seriously and we have come together time and time again to make decisions for the Northwest in the Northwest.

And yet this is no time to rest. We cannot look back on our accomplishments and consider our task complete, our responsibilities over. As well managed as the Columbia River is, we must do more. We have spent hundreds of millions of dollars in the last decade on fish management strategies and yet the facts are clear: several wild salmon runs are in trouble. We must come together again to answer the obvious question: How could this have happened?

The Northwest Power Planning and Conservation Act, which was passed in 1980, put fish on an equal footing with power production. As a result of that legislation, the Northwest Power Planning Council and Bonneville Power Administration have been deeply involved with efforts to ensure the health and existence of anadromous fisheries throughout the Columbia River basin. During the past decade, the Bonneville Power Administration has spent more than $1 billion to protect and even enhance salmon stocks.

INCREASED FEDERAL FUNDING SUPPORTED

In addition, as a former chairman of the Senate Appropriations Committee and now as its ranking Republican member, I supported increased Federal funding for a variety of fisheries projects designed to enhance our salmon runs. In the past 6 years alone, we have brought an additional $55 million to this region for the operation and maintenance of the Mitchell Act fish hatcheries which were built along the Columbia to mitigate the effects of Federal dam construction. In the past 3 years alone, we have secured another $28.7 million for fish bypass facilities along the Columbia and Snake Rivers, and additional money will be appropriated this year. I might point out that virtually all of this money has been appropriated in spite of the last two administrations, in spite of White House reluctance to fund these critical programs.

But for all our efforts, we have obviously not done enough. It is essential that we determine why the steps we have taken are inadequate; then we must identify ones which will work and implement them, not just because the threat of an Endangered Species Act listing is hanging like a sword over our heads, but because it is the right thing to do; not just because of the law, but because of our responsibility to be just and wise stewards of these resources.

I am hopeful that this morning's witnesses will provide us with insight into how the National Marine Fisheries Service intends to proceed, how the various and competing interests can participate in the process, and how the process can help ensure that the ultimate responsibility for managing the Columbia River basin remains in the Northwest.

But even that alone is not enough. Between now and October 1, I have two requests. First, I request that the Governors of the affected States, Federal agencies, the tribes, and other interests devise a process to develop a plan which should be called a predecisional management plan to address the issues presented by the potential threatened or endangered listings of these salmon runs.

This process might conceivably involve the designation of a multiagency group or, alternatively, the designation of an outside negotiator. But whatever process is agreed upon, it should be with the support of all parties.

Second, I would like to ask that each party independently prepare a list by October 1 of the potential options that may be incorporated into this predecisional management plan for the basin. Whether these options include increased flows, limitations on harvesting, or changes in the existing authorities, we need to have before us all available alternatives to respond to the scientific findings.

Now in order to help this process along, I believe that between now and October 1, the Northwest Power Planning Council should act as the facilitator for the States, tribes, Federal agencies, and other interests in developing a process whereby this management plan is implemented. Because of the existing workload of the council, it may be advisable for the council to employ an outside expert to assist in this effort, or one of their own staff. I am not suggesting how they handle it in terms of the organization.

While this endeavor will raise speculation regarding its ambitious goal, I do not need to remind anyone who has followed the spotted owl controversy that should we fail in this mission and a listing were to occur, the effect would be to divest the region and all of the institutions of their management flexibility.

If we have learned anything from our experiences with the northern spotted owl, it is that we have no time to waste. Everyone must put aside special interests and agree to work together to enhance the wild salmon runs of the Columbia River basin and to improve its overall management.

In short, we must do what Pacific Northerners have always done: exercise leadership.

Let me be very clear: there is no excuse for those who sit on their hands on the sidelines waiting for a crisis and then, only then, react to it. We have done that too often and it has cost us dearly. Now we must begin a good faith cooperative effort to devel-

op future management strategies for the Columbia River basin in the Northwest for the Northwest and by the people who live here.

PREPARED STATEMENT OF SENATOR HATFIELD

I am very honored to share this gavel this morning with my colleague from the House of Representatives, Congressman Ron Wyden, and I would like to invite him at this time to make any opening remarks he may wish to make, and then I would like to turn to Congresswoman Unsoeld.

[The statement follows:]

STATEMENT OF SENATOR MARK O. HATFIELD

This joint hearing -- under the auspices of the Senate Appropriations Committee and the Committee on Small Business of the House of Representatives -- has been convened to examine the declining numbers of wild salmon runs in the Columbia River Basin. I am particularly pleased to share the gavel this morning with Congressman Ron Wyden, with whom I share a commitment to maintaining both the environmental and the economic health of this state and this region.

Let me say at the outset: I am not suggesting that we attempt to supersede the Endangered Species Act process. That process has been set in motion -- and we will do what we can to make sure that it is carried out completely and fully.

It is impossible to live in Oregon -- or indeed anywhere in the Pacific Northwest -- and not know about the Endangered Species Act. The U.S. Fish and Wildlife Service's decision to list the northern spotted owl as a threatened species under that Act last week continues to send shock waves throughout Oregon, Washington, and northern California. As we attempt to develop future forest management strategies consistent with that listing, we now face another potential listing decision -- this time of a number of wild salmon runs in the Columbia and Snake Rivers.

The National Marine Fisheries Service already has received listing petitions on at least five species, and the clock is ticking -- ticking away toward a time two years from now when the Secretary of Commerce may well decide that the salmon runs in question are indeed threatened or endangered. Those runs include the Snake River sockeye salmon, the Lower Columbia coho, and the Snake River spring, summer, and fall chinook salmon. It is entirely possible that listing petitions will be filed on more than a dozen additional runs before this year is over -- and then the clock will begin ticking on them too.

I have no intention of turning this hearing into a rhetorical "scarefest." But I want to be very direct about what lies before us: a decision to list even one of those salmon runs as threatened or endangered could send an economic and social tidal wave throughout this region. Hydroelectric power generation; irrigation; commercial and recreational fishing; tribal fishing; navigation; dredging; timber production; and agriculture -- among other interests -- all would be severely affected. We cannot take this possibility lightly -- and we must not shrink from our responsibilities.

What are those responsibilities?

Clearly, one responsibility is to provide whatever support we can to the National Marine Fisheries Service as it carries out its legal obligations under the Endangered Species Act. The process mandated by that Act depends on hard facts -- on complete scientific data. That -- and that alone. No matter what our various interests, no matter what our own agenda: none of us should get in the way of that process. Doing so would only trap us in the same political and legal morass of "charge and countercharge" which has become a hallmark of the spotted owl debate -- a lose/lose proposition from everyone's standpoint.

But we have an additional responsibility. That responsibility is -- as it has been -- to develop sound management strategies

for the Columbia River Basin and its resources. I am not a scientist -- but it does not take a scientist to realize that some of these runs are in serious trouble. When it was released earlier this month, the initial report I requested from the National Marine Fisheries Service and the Oregon Department of Fish and Wildlife underscored a simple fact: the numbers of salmon in certain wild runs are alarmingly low.

The Secretary of Commerce will make the listing decision --but it should not take a listing under the Endangered Species Act to point out the obvious: our current management strategies are not working. At least not completely. Something needs to be done -- sooner rather than later.

As I said at the outset, I am not suggesting that we attempt to supersede the Endangered Species Act process. But I am suggesting that -- because we live here -- we have a special responsibility. The Columbia River Basin is a diverse and precious resource -- and we are its stewards.

Throughout my service as Governor of Oregon and as United States Senator for this state, I have taken great pride in our management of the Columbia River -- one of the world's great river systems. Although there have always been differences of opinion on which of the many river uses should dominate, there is general agreement on one point: the Columbia is one of the most productive and best-managed river systems in the United States. In short, we have taken our stewardship responsibilities seriously -- and we have come together time and time again to make decisions for the Northwest, in the Northwest.

And yet this is no time to rest. We cannot look back on our accomplishments and consider our task complete -- our responsibilities over. As well-managed as the Columbia River is, we must do more. We have spent hundreds of millions of dollars in the last decade on fish management strategies, and yet the facts are clear: several wild salmon runs are in trouble. We must come together again to answer the obvious question: how could this have happened?

The Northwest Power Planning and Conservation Act -- which was passed into law in 1980 -- put fish on an equal footing with power production. As a result of that legislation, the Northwest Power Planning Council and the Bonneville Power Administration have been deeply involved with efforts to ensure the health and existence of anadromous fisheries throughout the Columbia River Basin. During the past decade, the Bonneville Power Administration has spent more than $1 billion to protect and even enhance salmon stocks.

In addition, as the former Chairman of the Senate Appropriations Committee and now as its ranking Republican member, I have supported increased federal funding for a variety of fisheries projects designed to enhance our salmon runs. In the last six years alone, we have brought $55 million to this region for the operation and maintenance of the Mitchell Act fish hatcheries which were built along the Columbia to mitigate the effects of federal dam construction. In the past three years alone, we have secured $28.7 million for fish bypass facilities along the Columbia and Snake Rivers -- and additional money will be appropriated this year. I might point out that virtually all of this money has been appropriated in spite of the last two Administrations -- in spite of White House reluctance to fund these critical programs.

But for all our efforts, we have obviously not done enough. It is essential that we determine why the steps we have taken are inadequate. And then we must identify ones which will work -- and implement them. Not just because the threat of an Endangered Species Act listing is hanging like a sword of Damocles over our heads -- but because it is the right thing to do. Not just because of the law -- but because of our responsibility to be just and wise stewards of these resources.

I am hopeful that this morning's witnesses will provide us with insight into how the National Marine Fisheries Service intends to proceed, how the various and competing interests can participate in the process, and how the process can help ensure that the ultimate responsibility for managing the Columbia River Basin remains in the Northwest.

But even that alone is not enough. Between now and October 1, I have two requests. First, I request that the Governors of the affected states, the Federal agencies, Tribes, and other interests devise a process to develop a plan, which could be called a "pre-decisional" management plan, to address the issues presented by the potential threatened or endangered listing of these salmon runs.

This process might conceivably involve the designation of a multi-agency group; or alternatively the designation of an outside negotiator, but whatever process is agreed upon it should be with the support of all parties.

Second, I would ask that each party independently prepare a list by October 1 of the potential options that may be incorporated into this "pre-decisional" management plan for the Basin. Whether these options include increased flows, limitations on harvesting, or changes in existing authorities, we need to have before us all available alternatives to respond to the scientific findings.

In order to help this process along, I believe that between now and October 1, the Northwest Power Planning Council should act as a facilitator for the States, Tribes, Federal agencies and other interests in developing the process whereby this management plan is developed. Because of the existing workload of the Council it may be advisable for the Council to employ an outside expert to assist with this effort.

While this endeavor will raise speculation regarding its ambitious goal, I do not need to remind anyone who has followed the spotted owl controversy, that should we fail in this mission and a listing were to occur, the effect would be to divest the region and all of the institutions, of their management flexibility.

If we have learned anything from our experiences with the northern spotted owl, it is that we have no time to waste. Everyone must put aside special interests and agree to work together -- to enhance the wild salmon runs in the Columbia River Basin and to improve its overall management.

In short, we must do what Pacific Northwesterners have always done: exercise leadership.

Let me be very clear: there is no excuse for those who sit on their hands -- on the sidelines -- waiting for a crisis -- and then, and only then, reacting to it. We have done that too often -- and it has cost us dearly. Now we must begin a good faith cooperative effort to develop future management strategies for the Columbia River Basin -- in the Northwest, for the Northwest, and by the people who live here.

Now let me turn to Congressman Wyden for his opening statement.

OPENING STATEMENT OF REPRESENTATIVE RON WYDEN

Mr. WYDEN. Well, Senator, thank you very, very much for your graciousness in giving me the opportunity for this joint hearing for my Small Business Committee and the Senate Appropriations Committee. I will note for the record that you have worked very long and very hard on this issue before us today, and it is truly a pleasure have a chance to be here with you today. I think we are also very pleased that our colleague from across the river, Jolene Unsoeld, is with us. I have tried for some time to lure Jolene into serving on my Small Business Subcommittee; but she is doing very good and very important work in Merchant Marine in her committee. And we are just real pleased to have her come.

Senator Hatfield, I think you have summed up very well the issue before us, and I feel we know that our ecological system is out of kilter. Every year the hatchery production goes up but the wild and irreplaceable stocks are dwindling. And as you have said, we have got to address this, and we have got to do it quickly.

As both you and Jolene know, we have had a long week in Washington, DC, where we have what amounts to a sort of Northwest civil war on the spotted owl issue trying to deal with owl protection and old growth while at the same time preserving the jobs in timber. And I think what we are talking about here today is trying to prevent another civil war, this time one that hits our fishing stocks and power bills and the need for water and the other values that Northwest residents are concerned about.

I am particularly concerned because I think that listing the salmon as endangered could jolt the Northwest energy systems so hard that it would raise power bills in every home and every office and every factory in the Pacific Northwest, and obviously energy crises are one of the keys to an attractive way of life in the Pacific Northwest. We all have to be concerned about holding those power bills down.

I would only note that after all the fancy plans, after all the expensive programs, after all the lofty goals, what we are doing now is working. This approach where the bean counters constantly tout fish production, particularly in hatcheries, while wild stocks go down is no longer acceptable. And as you have noted, the salmon issue could make the spotted owl debate look very quiet, low key.

I want to conclude, Senator and Congresswoman Unsoeld, by saying I think there are grounds for optimism. I know of no Northwesterners who come to my office and say, "Bah, humbug" about fishing stocks. It is almost in our chromosomes to love our fish in the Pacific Northwest and there is a commitment from industry, from the State, from the tribes and the other area users to the salmon.

So I think getting out in front of this issue—and I want to say that I very much support the proposal that you are making today for this early action by fall. Getting out in front of this issue gives us a chance to not have the polarizing debate that we have had on the owl here in this fish arena.

So I would like to see us try to move these biological mountains, maybe even some juvenile salmon at the same time; and I would also just finally note that because both of us serve on the Energy

Committee as well, you, of course, in the Senate Energy Committee itself and I on Chairman Dingell's committee in the House, we have another opportunity to come to grips with this issue. And I just want to thank you for the fine work that you have done over all these years and look forward and after this to working with both you and Congresswoman Unsoeld.

Senator HATFIELD. Thank you, Mr. Congressman.

[The statement follows:]

STATEMENT OF CONGRESSMAN RON WYDEN

Senator, thank you for the chance to be with you. We've had a long week and are in the middle of a Northwest civil war between owl protection and timber jobs. Our challenge today is to help prevent another civil war in the Northwest that would pit fish protection against power bills and a host of other activities dependent upon Columbia River water.

Listing the salmon as an endangered species would rock the region from the Pacific to the Rockies, south to California, where they covet our water. On the one hand, listing the salmon as endangered is the siren song that we must protect the natural values we treasure most—our fish, our rivers, our special way of life.

On the other, listing the salmon as endangered would jolt the Northwest energy system so hard that it could raise electric bills in every home, every office, every factory in the Pacific Northwest. Commerce, fishing, shipping and irrigation could be hit by a wrecking ball. The salmon issue could make the owl debate look quiet.

The region has spent millions of dollars in recent years on salmon enhancement. There are fancy plans, expensive programs, and lofty goals. But while "bean counters" have tallied ever increasing hatchery production, irreplaceable wild stocks are dwindling. Something is wrong. The biological system seems out of kilter. Our job today is to try to assess the implications of the trends and determine what can be done to turn the situation around.

There is some reason for optimism. No Northwesterners come to my office and say they are against wild fishing stocks. There is a historic commitment, from industry, from the states, from the tribes, from the other river users, to salmon. This issue doesn't have to polarize the region. Our love of fish is almost in our chromosomes. We can work together, and together, we can move biological mountains—and maybe even juvenile salmon.

If today we can agree on the problems and come to some consensus on what needs to be done, we will be well on our way. Though this is an Appropriations and Small Business hearing, both the Senator and I sit on Energy committees back in Washington, committees that wrote the laws governing hydropower and Bonneville. We will put what we learn today to good use. I thank the Senator for all his and his staff's work and cooperation on this hearing, and I look forward to the testimony of our witnesses.

STATEMENT OF HON. JOLENE UNSOELD, U.S. REPRESENTATIVE FROM WASHINGTON

Senator HATFIELD. Now we turn to our neighbor from across the river, Congresswoman Unsoeld.

Ms. UNSOELD. Thank you very much. I want to thank you for having this hearing. It is the kind of thing that one would expect from a Senator from Oregon, but, you know, you are also our senior Senator from the Northwest, and I think this is typical of the role you have played in the Northwest in getting us to think about some of these things early. And I want to thank my colleague, Ron Wyden, for inviting me to be here today also.

The Columbia River is under assault from thirsty Californians, from the Federal Government that wants to renege on its commitment to our river, and from foreign drift net pirates who snare our salmon and steelhead on the high seas.

This hearing today called by Senator Hatfield and Representative Wyden is on the status of some of our salmon stocks. But the

health of these stocks also signifies the health of our river and the dwindling populations are warning us that the mighty Columbia is suffering from neglect. The issues involved in the possible listing of these species are complex and will require careful consideration. Power system operations, fishery management, water storage and flows, irrigation, navigation, and recreation must all be considered within an open and fair process to reach a balanced solution. With such an open and fair balanced process, we can move beyond the power versus fish arguments which have dominated in discussions so far and begin to focus how better to protect the entire Columbia River system as a source and how to ensure the necessary resources are devoted to that system.

Senator Hatfield is a tireless advocate for Columbia River funding, even though the administration has requested zero funding for hatcheries each of the past 9 years; and if it were left only to the U.S. Army Corps and Office of Management and Budget, we might never get the fish screen bypass funding to protect downstream migrating smolts from the massive turbines.

Just 2 weeks ago the House approved my request for $1.7 billion from the Corps to expedite screening projects at the Ice Harbor and The Dalles dams, two Federal projects that the Corps has argued are not economically justified. I hope the Senate will keep or improve this level of support. We need to move beyond the yearly funding games to ensure successful hatchery and fish package programs. We need stable, predictable funding.

Senator Hatfield, I look forward to working with you and Congressman Wyden in achieving this. Another example of the Columbia River under assault is California's proposal to divert water to their State. This is an utterly inappropriate and greedy proposal that would further strain the management of the system and place increased stress on our fisheries. I am sure our delegations will unite to fend off this attack.

And no discussion of the assault on salmon or steelhead resources can be considered complete without addressing the illegal high seas drift net fisheries. Most folks today in the Northwest are familiar with the National Marine Fishery Services report finding that 1 percent of the illegal foreign harvest could be Columbia River steelhead. If these figures are correct, the foreign fleets are taking more steelhead than the entire recreational quota for Washington State.

In the past year we have made significant progress toward bringing an end to this highly destructive fishing technique. The House, with strong support from Representative Wyden, has passed my legislation seeking an international ban, and Senator Hatfield has worked on several measures that recently passed the Senate Congress committees. Our only hurdle now the funding to impose an international ban and funds to collect more data.

But the National Marine Fishery Service is about to release another report from last year's U.S. observer program on the foreign boats. From what I can gather, it is supposed to be released by the end of this month. This report confirms our worst fears. Wholesale destruction, tens of thousands of vast numbers of marine mammals and other marine resources by foreign drift net on the high seas. When this new information is brought out in the open, I am hope-

ful the President will change his position and sign our tough drift net bill to provide protection for our salmon and steelhead.

Senator Hatfield, Congressman Wyden, I want to thank you both again for inviting me today. We have many witnesses who have a great interest in the Columbia River system. I look forward to their testimony. And I was really pleased to hear, Senator Hatfield, about your predecision management plan. Cooperation across the river for our river I pledge to you.

Senator HATFIELD. Before I call the first witness, I would like to have the equivalent of two documents placed in this record for our reference. I would like first of all to have the "Discussion Paper on Mitchell Act Hatcheries," which was formed by the task force which was formed 2 years ago to set up a self-financing plan for the Columbia River hatcheries included.

Congresswoman Unsoeld, as you recall, Senator Magnuson was on the Appropriations Committee, and it was my privilege to join him on that committee. For years we had individually restored moneys for fishery management and fisheries enhancement because the administration had excised even the Mitchell Act funds, and realizing that I, too, am mortal, as Senator Magnuson and any other person, I asked the various agencies to come together about 2 years ago and to help work out a self-financing plan.

We should not depend on a person from Oregon or Washington to be chairman or a member of the Appropriations Committee to sustain a dependable, reliable funding system. Now that could include Indian tribes, Federal agencies, State agencies, other groups that have been meeting over the past 2 years trying to come up with some kind of proposal for a self-financing fund that could provide stability for the future. I would like a summary of that in the record.

Second, I would like the record to reflect that on July 6, 1989, I chaired a Senate Appropriations Committee special hearing in Newport on foreign driftnet fishing and its impact upon fisheries in the Northwest. The official transcript of that hearing is in print and available as Senate Hearing 101-525 and entitled, "Expansion of the North Pacific High Seas Driftnet Fisheries." I think that ultimately we will have to deal with that as part of the overall solution to the dwindling salmon runs in the Columbia River basin.

Finally, I would like to have in the record, with the approval of my colleagues, the status review that was prepared by the National Marine Fisheries Service and the Oregon Department of Fish and Wildlife that was submitted to me on June 1 and which indicates the danger that we face with some of these runs.

I think those are documents that could be helpful in completing the record. Any objection? If not, they will be incorporated into the record.

[The information follows:]

DISCUSSION PAPER ON MITCHELL ACT HATCHERIES

EXECUTIVE SUMMARY

Congress passed the Mitchell Act in 1938 and amended it in 1949. This legislation provided federal agencies with the authority to work with the states to set up and operate a series of hatcheries and passage facilities to counter declining fish runs in the Columbia River. The reports accompanying the legislation state that these facilities address the adverse effects of commercial fishing, irrigation, forest practices, pollution, and flood control, as well as the impacts of hydroelectric development. With the Mitchell Act, Congress acknowledged the obligations of the federal taxpayers to mitigate some of the damage to the Columbia River fisheries.

Congressional funding has grown from a one-half million dollar appropriation in 1938, to about $8.5 to $9.5 million annually. These funds support the Columbia River Fish Development Program (CRFDP) administered by the National Marine Fisheries Service. Between $6.5 and $7.5 million annually of these funds go to the Oregon Department of Fish and Wildlife, Washington Departments of Fisheries and Wildlife, and the U.S. Fish and Wildlife Service to run 25 hatcheries. These hatcheries produce 3 to 3.5 million pounds of juveniles or about 100 million smolts each year, mostly on the lower Columbia River. In addition, this program has funded the construction of about 800 irrigation diversion screens; it continues to maintain about 600. The CRFDP also built 45 fish ladders, of which 43 are still operating. Congress has appropriated a total of $166 million since 1949 for capital and O&M at Mitchell Act projects.

As the austerity of the federal budget has increased, pressure from the OMB has grown to transfer the funding of the Mitchell Act from the federal budget to Bonneville. Senator Hatfield and others in Congress have been instrumental in putting money back into the federal budget each year to fund the Mitchell Act. In a meeting in August 1988, however, Senator Hatfield requested that the interested parties in the Northwest develop a consensus alternative for funding these facilities that will avoid annual federal budget disputes.

An ad hoc working group has gotten together and in the ensuing meetings, four alternatives for the future funding of the Mitchell Act facilities have been proposed. These are:

1. Continue Commerce Department (NMFS) funding;
2. Transfer funding to Interior Department (USFWS);
3. Use BPA funds partially or totally; or
4. Develop other funding sources (various state or federal revenue sources).

The ad hoc working group has focused attention on an alternative that would use BPA funds and has developed a number of principles that could guide funding and management of the hatcheries if BPA funds are used.

Discussions indicate that there appear to be four major issues requiring resolution among the various regional interests before there is agreement on the use of BPA funds. These issues are:

a. BPA's role and responsibilities;

b. crediting and implications for the Council's program;

c. the agency to administer the hatchery program; and

d. the sharing of O&M funding.

This paper focuses discussions on these important issues and provides more details on the background of the Mitchell Act. The paper also discusses the funding alternatives, and the key issues needing resolution.

MITCHELL ACT HATCHERIES

INTRODUCTION

Under the Mitchell Act, funds are authorized to be appropriated for capital and operations and maintenance of 10 Oregon and 15 Washington hatcheries. These hatcheries produce 50 to 70 percent of the salmon released into the Columbia River. They are a principal mainstay of both the commercial and recreational fisheries in the Northwest. The Mitchell Act funds also support research activities and a series of fish passage facilities such as fish ladders and irrigation screens to assist juvenile and adult fish migration.

Funds for the hatcheries are appropriated through the Department of Commerce budget and are distributed to the State of Oregon, State of Washington, and the U.S. Fish and Wildlife Service which operate the hatcheries. Since 1983, OMB has sought to replace the Mitchell Act funding in the Department of Commerce budget with Bonneville Power Administration (BPA) ratepayer funding. In recent years, the Administration budget request has proposed no appropriations for the Mitchell Act. Although each year Congress has restored the funds to the Commerce budget, the hatcheries were funded at about the same level for the last five years. Over the years, repairs and maintenance of the hatchery system has been deferred, although total production has not changed significantly. Mitchell Act hatcheries produced 102.4 million smolts in 1981, compared with 106.3 million in 1988. Nevertheless, production may decrease in the future. Although Congressional funding was slightly higher in FY 1989, two Washington hatcheries were closed temporarily in 1988 and several more have a significant backlog of maintenance and may be slated for closure unless more funds are available in future years.

There is interest in Congress and the region to secure more stable, predictable and adequate funding over the long term for Mitchell Act hatcheries. The key question to consider is whether the region, through Bonneville and/or some other funding source, should fund all or some part of the operation, maintenance, and rehabilitation of the Mitchell Act hatcheries rather than rely on the availability of annual federal appropriations. This discussion paper examines the background of the Mitchell Act and outlines some alternative funding options for the hatcheries. It is assumed that other facilities and activities under the Mitchell Act will continue to be funded through federal appropriations.

BACKGROUND

Mitchell Act

In 1938, Congress passed the Mitchell Act to provide for the conservation of the fisheries resources of the Columbia River and to authorize the

appropriation of $500,000 for surveys and improvements in the Columbia River Basin for the benefit and conservation of salmon and steelhead. The purpose of the first appropriation was to reinvest fees paid by fishermen between 1905 and 1931 for leases on Federally-owned seining grounds at the mouth of the Columbia River. The Committee Report for the Mitchell Act indicated that the bill was intended to:

> . . . take care of situations in the salmon industry which arise from the construction of certain Government works and particularly from the building of the Bonneville Dam across the Columbia River, near Portland . . . The States of Oregon and Washington have for years been engaged in maintaining the salmon run by artificial means, and have spent large sums of money for the purpose. The Federal Government has aided, but it is impossible for the States to keep pace with the development of irrigation, reclamation, and power projects. [U.S. House of Representatives, 75th Congress, 3rd Session, Merchant Marine and Fisheries Committee, Report No. 2235.]

The Secretary of Commerce supported the original act and concluded: "Since the salmon resources are a national asset they should be protected by the National Government."

Stream census and surveys were initiated and by the mid-1940's, most tributary streams in the Columbia Basin had been surveyed. These surveys indicated a degradation of the original fisheries habitat had occurred. Hydroelectric projects had reduced the area available to anadromous fish while mining and lumber operations and unscreened irrigation diversions were adversely affecting salmon and steelhead in the remaining habitat.

The Mitchell Act was amended in 1946 to remove the limitations on appropriations from Congress and broaden funding authority for development of anadromous fish in the Columbia Basin. Congress emphasized the need for state agency involvement. The Act authorized the use of facilities and services from the State agencies of Idaho, Washington, and Oregon in developing the fishery resources of the region:

> ". . . it has been demonstrated that various programs and activities relating to the development of the Columbia River Basin, at least insofar as they affect the fishery resources of that area, require the joint and coordinated attention of not only Federal agencies but also of the interests of the agencies of the States responsible for the conservation of the fish and wildlife resources of Oregon, Washington, and Idaho. [U.S. Senate, 79th Congress, 2d Session, Committee on Commerce, Report No. 1837]

The Act called for closer cooperation between Federal and State governments and for the first time authorized the transfer of Federal funds to the States for specific work.

Columbia River Fisheries Development Program (CRFDP)

In 1947, water development and fisheries agencies formed the Lower Columbia River Fisheries Development Program (CRFDP) to provide increased productivity and to provide mitigation for losses occurring due to the development of hydroelectric dams, irrigation withdrawals, forest practices, pollution, and other factors reducing the productivity of the Basin. CRFDP provided a means to plan and coordinate increased use of Mitchell Act funds. The Program was administered by the Department of Interior, U. S. Fish and Wildlife Service (USFWS).

Prior to 1956, the CRFDP involved only the States of Oregon and Washington and included that part of the Columbia Basin located below McNary Dam. In 1956, Congress instructed the CRFDP to develop the fishery resources above McNary Dam, and Idaho became a participant in 1957. At this time, the word "Lower" was dropped from the CRFDP name.

In 1970, the Nixon Administration's reorganization plan resulted in a transfer of these activities from the Department of Interior to the Department of Commerce. Prior to that time, the Interior Department's Fish and Wildlife Service (USFWS) was composed of the Bureau of Sport Fisheries and Bureau of Commercial Fisheries (BCF) with the CRFDP administered primarily by the BCF. In 1970, the President established a new agency within the Department of Commerce, the National Oceanic and Atmospheric Administration (NOAA). Under the Reorganization Plan, nearly all the functions vested by law within the BCF, including those pertinent to this program, were transferred to NOAA. The National Marine Fisheries Service (NMFS) was established by NOAA to exercise the functions formerly carried out by the Bureau of Commercial Fisheries. The CRFDP has been administered by NMFS since the reorganization.

Since its creation, the CRFDP's goal has been to develop maximum salmon and steelhead runs into the Columbia Basin and increase adult contribution to the various fisheries and escapement. To work toward that goal, the CRFDP has concentrated on three areas: hatchery construction and operation, stream improvement and the screening of irrigation diversions, and hatchery improvement studies. Funding under the Mitchell Act built and operates 25 hatcheries and related facilities. All but two are located on the lower Columbia River (see attached map-Attachment 1). The CRFDP also funded the construction of 45 fishways (ladders) throughout the Columbia Basin, 43 are still operating. Over 800 irrigation diversions have been screened; 575 in Oregon, 235 in Idaho, and 16 in Washington. About 600 are still being operated.

The Columbia River tribes have objected to the emphasis on production of fish below Bonneville Dam. Most of the fish are produced below Bonneville despite the fact that runs destroyed by the installation of the dams were upriver runs. Fish produced below Bonneville do not pass through the ceded areas of the tribes and have not been available to Indian fisheries. The Columbia River Fishery Management plan agreed to under U.S. v. Oregon directs the reprogramming of some lower river production to areas above Bonneville Dam.

FUNDING OF THE MITCHELL ACT

The Mitchell Act contains broad and very general authority for the executive branch to request appropriations and expend funds for fishery resource purposes in the Columbia Basin (Attachment 2). Pursuant to this authorization and in response to the CRFDP, Congress approved a $1 million Corps of Engineers appropriation in 1949 to initiate Mitchell Act activities. Since 1949, funds expended for capital, operations and maintenance for Mitchell Act facilities totaled $175 million (Attachment 3). CRFDP envisioned initial capital costs of $20 million over the first 10 years primarily for hatchery production and fish passage. These projections were fairly accurate. In the first 10 years, the Mitchell Act was funded through the Corps of Engineers at about $2 million per year with the early years being focused mostly on construction of facilities. For the next 10 years, these facilities were funded through Interior Department (USFWS) appropriations at closer to $3 million per year with a shift toward O&M activities. From 1970, the trend for Department of Commerce (NMFS) appropriations for these activities has increased until 1983. For the next five years, the total amount of appropriations funding has declined (Attachment 3).

From 1983 through 1988, funding for Mitchell Act facilities has been level or declining. This funding level has been achieved through Congressional additions to the President's budget request. In the last few years, the budget request has proposed no appropriations for Mitchell Act. The House Appropriations Committee has reinstated funds and the Senate Appropriations Committee agreed to or increased the funding. Since 1983, the Administration has sought to replace Mitchell Act funding in the Department of Commerce budget with Bonneville Power Administration (BPA) ratepayer funding. In recent years, the Administration has proposed legislation to the Congress that would provide the Department of Commerce with BPA funding for the administration and operation of Mitchell Act hatcheries.

Even with the Congressional additions, in real terms, funding for the hatcheries and other facilities has decreased, and the hatcheries have received only minimal maintenance required for production and safety. Basic maintenance and equipment purchases have been backlogged, including replacement of incubation systems, repair of dam intake structures, purchase of updated equipment, and replacement of fish pumps.

Over the last ten years from 1978 to 1987, operation and maintenance costs on the Mitchell Act hatcheries has averaged $6.3 million annually, ranging from $4.5 million in 1978 to $7.8 million in 1984 (Attachments 4 and 5). In real terms (adjusted for inflation), hatchery funding has decreased since 1983 from about $9.2 million in 1988 dollars to $6.6 million in 1988 (Attachment 4).

In 1988, Congress reduced the overall Department of Commerce budget by 6 percent, but did not specifically prohibit Commerce from distributing this reduction disproportionately among its programs. After initially proposing a 13 percent reduction in Mitchell Act hatcheries, Commerce, under pressure from Congress, eventually reduced its Mitchell Act allocations by 6 percent. These reductions resulted in temporary hatchery closures in Washington and raised the potential for closure of additional hatcheries in 1989.

In 1989, the Administration budget request included no funds for Mitchell Act hatcheries. The House proposed funding Mitchell Act activities at the 1988 level of about $8 million. The Senate agreed to Senator Hatfield's amendment to fund the hatcheries at $10.3 million. The final appropriation for Mitchell Act hatcheries in the Commerce appropriation was $9.3 million.

In 1990, the Administration budget request again included no funds for Mitchell Act hatchery operations and maintenance. The agencies and tribes have requested that Congress add a total of $10.6 million for the Mitchell Act program. No action has been scheduled by the House or Senate Appropriations Committees.

HATCHERY PRODUCTION

Despite deferrals of maintenance and declines of the Mitchell Act hatchery funding, production has not yet declined. (See Attachments 6 and 7). Over the last ten years, 1978-1987, the Mitchell Act hatcheries have produced an average of 3.3 million pounds or 108 million juvenile fish each year. This has ranged from highs of 3.63 million and 3.68 million pounds in 1978 and 1986 to lows of 3.04 million in both 1983 and 1985.

The relative contribution of various stocks to this total has also remained fairly constant. On a weight basis, coho have made up about 40 percent of the production; fall chinook added about 32 percent; spring (and a few summer) chinook made up 16 percent; and steelhead and cutthroat contributed the remaining 13 percent. In 1987, NMFS estimated that over 168,000 adults returned to Mitchell Act hatcheries. Many more are caught in the ocean and lower Columbia River fishery.

STATUS OF HATCHERIES

Operations and Maintenance

With the exception of 1988, recent funding levels for operation and maintenance of Mitchell Act hatcheries has ranged from $7.1 million to $7.8 million in nominal terms. While these funding levels appear to be inadequate for the long term, increases in funding should be fully justified. The agencies and tribes will provide detailed information on the level of funding needed for a stable long-term program. The program is expected to reflect the operational changes and associated costs resulting from U.S. v. Oregon. Future budgets also should indicate funding for specific activities such as pathology, nutrition, technical services, etc., in order to avoid misunderstandings. The agencies and tribes propose a $10.8 million base level of funding for the Mitchell Act fish propagation program (Attachment 8a-8d). The base level includes about $2 million in annual maintenance for the hatcheries so that future rehabilitation will not be necessary. It should also be noted that the base level does not include any overhead for an administrative agency (currently NMFS).

Closures

With full production from all hatcheries a continuing goal, reprogramming of available funds to meet the highest priority production program is a cooperative inter-agency venture. Although a few stations have faced closure during the past few years due to reduced funding, the operating and funding agencies have met the challenge to maintain production levels while deferring maintenance.

At hatcheries closed in 1988, reduced funding forced early release and transfer of stocks to other operating hatcheries. These early releases and transfers surely will reduce contributions from the affected hatcheries. To date, there have been no hatcheries where deferred critical maintenance has resulted in emergency situations for fish production or human safety.

Although all hatcheries "mothballed" in 1988 are now operating, this past experience points to the vulnerability of the hatcheries to insufficient funds. The continued threat of maintaining caretaker status or closure of hatchery facilities is contrary to the purpose of the Mitchell Act.

Rehabilitation

Construction of the Mitchell Act hatcheries began in 1950. Most of the hatcheries were completed by 1960. The operating agencies indicate that all the hatcheries need major rehabilitation. Basic maintenance and equipment purchases have been backlogged in recent years. Major capital rehabilitation work has been deferred due in large part to budget constraints. These rehabilitation expenditures would help maintain the current production from the hatcheries in the future.

Based on operating agency input, NMFS estimates that $19.8 million over five years will be needed to rehabilitate Mitchell Act hatcheries. There is a detailed estimate of rehabilitation costs available from the operating agencies. This estimate shows the magnitude of the rehabilitation backlog. Of these costs, approximately $2.5 million is for equipment needs at the hatcheries and

$5.3 million is for rehabilitation of the Toutle Hatchery[1] with the remaining amount allocated for deferred maintenance. Sufficient rehabilitation funds have not been budgeted or appropriated in the past and the proposed work has been postponed.

All the interests in the region strongly support a federal appropriation to rehabilitate the hatcheries. The agencies and tribes suggest that funds be appropriated through the Commerce Department for expenditure over a five-year period to give agencies sufficient time to complete the work with existing engineering, contracting, and construction capabilities.

Enhancements

Some of the hatchery sites have the potential to produce more smolts. This is only possible with new construction and the availability of additional operating and maintenance funding. These opportunities for increases should be identified by the ongoing Hatchery Assessment/Capacity Study presently funded by BPA. This production could be counted as part of the Council's doubling goal and credited to the funding agency.

ALTERNATIVE FUNDING OPTIONS

Although Congress recognized the federal mitigation responsibility when it passed the Mitchell Act in 1938, as the budget has gotten tighter, federal support for the hatcheries has decreased and further support has become increasingly insecure. Senator Mark Hatfield (R-Ore) and others have been instrumental in adding funding into the federal budget each year since 1983 for the Mitchell Act. In a series of meetings in 1988, however, he requested that interested parties in the Northwest develop a consensus alternative for funding these activities that would avoid annual federal budget disputes. Recognizing that appropriations through the current process may be limited or terminated in the future, then what other funding options may be available? Some possible options are briefly discussed below.

1. Continue Commerce Department Funding (status quo).

This option represents the status quo of continuing the effort to obtain annual appropriations for the Department of Commerce, National Marine Fisheries Service (NMFS). The Congressional delegation has been successful at restoring funds for the Mitchell Act facilities in the past based on the argument that these facilities support a national and international fisheries resource and are part of the federal government's trust responsibility to the tribes. There are some additional reasons for continuing the current funding mechanism. First, NMFS is the current administrator of the hatcheries and has a management system which dispenses the funds to operating agencies. Second, commercial fishermen are comfortable with NMFS' role and probably would not want to change the management structure. Third, NMFS' current overhead for the hatcheries is low -- less than 5 percent. Fourth, NMFS helps manage the ocean fishery and is in a good position to relate hatchery production to harvest controls.

1/ Currently, Lower Kalama Hatchery is replacing a portion of the fish that were produced at the Toutle Hatchery prior to its devastation by the eruption of Mount St. Helens. Rebuilding the Toutle Hatchery is necessary to fully utilize the watersheds appropriately covered under the Mitchell Act. Lower Kalama currently releases fish into a river system, the Kalama River, which already has another Mitchell Act hatchery, Kalama Falls, on it.

On the other hand, NMFS in recent years has been the stepchild of the Commerce Department and has not been a high priority for funding. Due to the deferred maintenance at the facilities, higher funding levels will be required in the Commerce budget in order to maintain production levels.

In Congress, the Commerce Appropriations Subcommittee in the House has no Northwest representative, but has provided support for the Mitchell Act in the past. The Commerce Subcommittee in the Senate has Senator Mark Hatfield (R-Ore) and Senator Brock Adams (D-Wash) as members.

2. Transfer Funding to Interior Department

This alternative would transfer program responsibility and funding from Commerce to the Department of the Interior, USFWS. Funding for Mitchell Act facilities would be obtained in the annual appropriations process, but through a different federal agency and another appropriations bill.

Although USFWS hatcheries have also experienced funding reductions during the last few years, funding of Mitchell Act facilities through the Interior Department might result in higher and more stable levels of support. First, the USFWS seems to have more support and influence with the Interior Department than NMFS has within the Commerce Department. Second, the USFWS' appropriated budget is much larger than the NMFS budget – about $400 million compared to $170 million. USFWS currently funds and operates a hatchery program of about $28 million per year. These hatcheries are scattered around the country including hatcheries in the west and south. Mr. Whitten (D-Miss), Chairman of the House Appropriations Committee, and Mr. Bevill (D-Alabama) of the House Appropriations, have facilities in their districts. Accordingly, the Mitchell Act funding would be a smaller portion of the budget and might be more easily defended. Third, the Interior Department's traditional role in natural resource stewardship and its western influence may provide a better home for these programs. In addition, Interior has jurisdiction over Indian affairs and is more attuned to the nation's trust responsibilities to the tribes. Fourth, the Interior Appropriations Subcommittee has a larger budget allocation than the Commerce, State, Justice appropriations – thus, more funding flexibility. Fifth, the House Interior Appropriations Subcommittee, where all appropriations bills originate, has two key Northwest Congressmen as members -- Les AuCoin (D-Ore) and Norm Dicks (D-Wash). Mr. Dicks could ascend to the Chairmanship of the Subcommittee in the not-too-distant future. The Senate Interior Appropriations Subcommittee has Senator Jim McClure (R-Idaho), as its ranking Republican, and Senator Mark Hatfield (R-Ore), as top Republican on the full Committee, is an ex-officio member.

There has been interest in legislation to transfer Mitchell Act funding to Interior (USFWS). Unfortunately, a change in jurisdiction that can affect federal agencies and Congressional committees may bog down in turf battles unrelated to the substantive issues. Key members outside the region with some control over authorization and appropriations may take special interest in a shift in agencies where the competition for federal appropriated funds can impact other programs of special interest to them. The difficulties of a shift between agencies supported with appropriated funds must be weighed against the likelihood that higher levels of support will be obtained through the new agency, USFWS.

3. Use BPA funds, partially or totally.

Three possible ways to implement this option are described below. Under any of these methods, there is a shift from taxpayers – national funding of

the Mitchell Act to the region's ratepayers. This change to ratepayer funding should provide more stable and adequate funding levels for annual operations and maintenance. Reductions in budget proposals at the departmental level or at OMB, which are common for appropriated programs, seldom occur under the BPA budget process.

In the past, Bonneville has indicated that language in the Northwest Power Act prohibits it from funding the Mitchell Act facilities. The Act limits BPA expenditures for fish and wildlife to those which are "in addition to, not in lieu of, other expenditures authorized or required from other entities under other agreements or provisions of law." Legislative history indicates that Congress intended this language to limit the use of BPA funding as a substitute source of funding for existing fisheries programs. Notwithstanding that background, there seems to be some question about the interpretation of this language. In any event, if Congress proposes a change in Mitchell Act funding through legislation, either an authorization bill or an appropriations bill, the "in lieu of" provision can be addressed by this subsequent legislative provision.

Another fundamental question to consider under a shift to BPA funding is whether there should be a transition or phase-in period for ratepayer funding. A gradual phase-in could help ease the financial impact on the region and lessen the potential impact on other BPA operating and capital programs. Since the amount of appropriations would be declining, there should be less pressure on the Congressional delegation to defend the program and less reason for an administration to target the funding. In addition, a phase-in could be designed to provide for appropriations funded rehabilitation of the hatcheries over a period of time. The region would inherit quality, upgraded hatcheries, and there would not be the need for a large one-time appropriation for rehabilitation. The transition period issue would apply to any of the approaches described below.

a) Combine with Lower Snake River Compensation Program. This alternative would involve BPA funding through combining the Mitchell Act hatcheries with Lower Snake River Compensation Plan (LSRCP) funding. Transfer Mitchell Act authority to USFWS, and provide for Mitchell Act funding similar to LSRCP funding. This option would require USFWS to receive an annual appropriation from Congress to cover all Mitchell Act costs. At the end of each fiscal year, BPA would repay the U.S. Treasury an amount of funds equal to the USFWS Mitchell Act costs or expenses for the year.

b. Contract with NMFS or USFWS. BPA would directly fund Mitchell Act hatcheries under contract with NMFS or USFWS. BPA would pass funds through to the central administrative fishery agency. Then this agency would disburse the funds to the operating agencies.

4. Other Funding Sources

This option requires legislation to use new or existing revenue collection methods to replace Mitchell Act appropriations. At least five general "resource users" have historically shared in contributing to the decline of salmon in the Columbia Basin, or benefit from increased salmon production. Potential funding sources include: timber taxes, irrigation fees, navigation fees, contributions from non-Federal utilities, state revenues, and commercial salmon landing taxes and recreational gear taxes. These additional revenues could be used as all or a portion of the funding needed for the Mitchell Act hatcheries.

REMAINING ISSUES

In response to the Congressional request, a working group of representatives from regional interests has been meeting since September of 1988 to gather data, discuss problems and consider options for funding the Mitchell Act hatcheries. Because the BPA funding option, which is discussed above, affects regional interests other than those of the state and federal governments and because it is the focus of OMB's efforts to find an alternative source of funds, this option has been discussed in more detail than the other options. If BPA provides funding for the Mitchell Act hatcheries, six principles could guide consideration of a BPA funding option. These principles would need to be clarified through a Memorandum of Agreement (MOA) and/or legislation. The principles include:

1. BPA would fund the hatcheries through a federal administering agency to be specified through an MOA.

2. Through the MOA the agencies and tribes and BPA would establish a base budget level and would agree to fiscal and performance standards for the hatcheries.

3. BPA would maintain fiscal oversight of the activities it funds.

4. Fishery management decisions would be made by the agencies and tribes under an MOA.

5. Mitchell Act research and fish passage activities would remain funded by the Department of Commerce.

6. Funds should be appropriated to rehabilitate the hatcheries.

Under the BPA funding option, there appears to be four remaining issues which must be resolved before a consensus can be reached in the region. The issues are listed below followed by comments of the major participants: the Bonneville Power Administration, the agencies and tribes, and the utilities represented by PNUCC.

1. What are the Agencies' Responsibilities?

If the region, through Bonneville, provides funding for the Mitchell Act hatcheries, what is the extent of Bonneville oversight? Bonneville and the agencies and tribes have made progress on over 20 specific issues which should be considered in an agreement between Bonneville and the agencies and tribes, but some issues remain unresolved.

Bonneville: Regardless of the funding source, hatchery operators are expected to meet certain fiscal and performance standards in order to be accountable for production from each facility. Any agency responsible for funding a large scale hatchery program should have established explicit production goals and have the means to assess progress towards those goals.

If Bonneville is responsible for funding the hatcheries, we expect to be able to review and use hatchery cost and production data. Bonneville does not believe hatcheries should be closed if they do not meet explicit production goals. But long-term production problems cannot be assessed unless each hatchery has in place explicit production goals. Bonneville's intent is to

devote the resources necessary to ensure hatchery productivity. Over the long term, we should be prepared to implement significant changes in hatcheries that consistently fail to meet production goals.

Agencies and Tribes: The agencies and tribes agree in principle that if Bonneville were to fund a significant part of Mitchell Act hatchery operations, they have a right to expect enough information to ensure fiscal and performance accountability. The agencies and tribes feel that the existing level of oversight and reporting required by National Marine Fisheries Service is appropriate. Specific roles and responsibilities should be identified in the Memorandum of Agreement between Bonneville and the administering federal agency.

This position is a compromise by the agencies and tribes from the preferred approach used in the Lower Snake River Compensation Plan. In the Lower Snake Plan, the production agencies are recognized as the experts and the federal agency administering the program, the Congressional oversight and the federal audit procedures provide protection of the ratepayer's interest.

PNUCC: To the extent that Bonneville funds operate and maintain these hatcheries, Bonneville must be able to assure that its funds are spent wisely. To this end, Bonneville must have oversight of the uses to which the hatcheries are put, of the effectiveness with which these goals are being met, and of the appropriateness of the expenditures.

This means that BPA must be a full participant in the process setting production goals for the hatcheries to assure that they are reasonable and that the hatcheries are operated to attain the goals of the Council's Fish and Wildlife Program. BPA must also have the information necessary to evaluate the individual hatchery's performance in attaining their production goals. And finally, BPA must be able to assure that the ratepayers' funds are spent cost-effectively while following prudent business practice.

Neither the approach used to fund the Lower Snake River Comprehensive Plan nor the current approach used by NMFS is adequate in these regards. BPA needs additional controls beyond those provided in these two approaches.

2. Which Federal Agency will Administer the Hatcheries?

The region should determine which federal agency -- NMFS, USFWS or BPA -- will administer the hatcheries.

Bonneville: This is not an issue that USFWS, NMFS, the Tribes, and operating agencies should resolve among themselves. As a potential source of funds, Bonneville has a role in this decision. We are particularly interested in holding overhead and other administrative costs to a minimum, but we must also be assured that the administering agency will provide the budgetary information we seek to ensure effective oversight of our funds.

If USFWS ultimately administers the Mitchell Act hatcheries, Bonneville believes the funding arrangement for the Lower Snake hatcheries should be altered to provide a direct BPA-USFWS funding arrangement. Bonneville is opposed to using two separate funding mechanisms to fund hatchery programs in one federal agency. Consolidation of the two hatchery systems may provide significant cost efficiencies. Since we believe a direct financial arrangement between Bonneville and USFWS provides the best accountability and fiscal oversight for Bonneville, we are opposed to funding the Mitchell Act hatcheries under practices similar to the Lower Snake Program.

Agencies and Tribes: The agencies and tribes concur that the USFWS and NMFS should not resolve this issue alone. The agencies, tribes and

Bonneville should play appropriate roles in determining the administrator. The agencies and tribes are currently developing an issue paper which addresses concerns, pros and cons for both USFWS and NMFS. Regardless of which agency administers the program, a memorandum of understanding regarding production decisions will be developed among the federal, state and tribal fisheries agencies.

Overhead costs will be 1/2 percent of the total funding provided to operate and maintain the hatcheries regardless of which federal fishery agency administers the program.

PNUCC: Bonneville should administer the funding itself, by entering into separate contracts with each operating agency and evaluating each hatchery's performance. We believe that it would be more efficient for BPA to administer the program itself. This would give BPA more direct involvement in the management of the hatcheries to assure that the Council's program goals are met. In addition, we are concerned that the overhead rates of federal agencies (other than BPA) may include support for out-of-region staff. It is our view that ratepayer funds collected in the region must stay in the region.

3. Crediting - Implications for the Council's Program

What "credit" should Bonneville receive if it provides funds to operate and maintain the Mitchell Act hatcheries? There are two aspects to this issue. First, how should fish production that existed prior to the establishment of the Council's goal be accounted for if BPA provides funding for that production? Second, should regional funds for Mitchell Act hatcheries be added to the annual amount spent on the Council's Fish and Wildlife Program or reduce the annual level of funding for implementation of the program? The Council's program establishes the interim goal of doubling the runs from 2.5 to 5 million adult fish: "Doubling means increasing the current run size of about 2.5 million adult fish to a run size of about 5 million adult fish, as a result of implementation of this program." [Program Measure 202(a)]

Bonneville: In adopting its interim goal, the Council did not anticipate that Bonneville funding would be necessary to maintain hatchery production that existed prior to the program. If Mitchell Act funding is transferred to Bonneville, the Council must recognize that Bonneville's obligation for mitigating for hydro development and operations would increase from producing 2.5 million fish to producing about 3.8 million fish.

If Bonneville contributes 100 percent of the funding for Mitchell Act hatcheries, we should obtain credit for having produced the approximately 1.3 million adults produced by the Mitchell Act hatcheries. "But for" Bonneville contributions, production at these facilities would be zero if no other funding is available.

Bonneville is committed to achieving the Council's interim goal of producing runs of 5 million fish. But the Mitchell Act is a new, significant fishery obligation. The approximately $10 million needed annually to operate the hatcheries will affect our existing efforts to achieve the Council's interim goal. We believe the Council should consider the Mitchell Act hatcheries as an integral element of its program and we expect to see a program amendment addressing the Mitchell Act. In particular, Bonneville believes there must be a recognition that progress toward the Council's interim goal may be affected. But the goal will remain at 5 million fish.

Agencies and Tribes: The agencies and tribes feel strongly that crediting should not be a factor in these negotiations. The Council's interim goal is to

double the runs. We believe this goal should remain on a fast track and that funds necessary for the Mitchell Act hatchery operation should be in addition to the dollars provided for the fish and wildlife program. It must be recognized that the existing level of Mitchell Act production is part of the pre-program Columbia River run and maintenance of this production does not contribute to the doubling goal. Only future increased production at expanded facilities, with the emphasis on above-Bonneville releases as specified in the Council's Fish and Wildlife Program, could properly be credited toward the doubling goal or charged to the fish and wildlife program budget.

PNUCC: These "crediting" issues are a central concern for members and represent basic conditions that must be met before pick up the funding of the Mitchell Act hatcheries.

First, the necessary legal aspects must be cleared up. This should include Congress addressing the issue of federal taxpayer responsibility for mitigating damage to fish runs from federal activities, including the hydroelectric dams and clarifying funding authorities. Further, the Council must amend its Fish and Wildlife Program to include the Mitchell Act hatcheries as a BPA responsibility under Section 4(h) of the Northwest Power Act.

Second, because this would be a new responsibility for it in the program, BPA must get full credit toward the Council's interim goal for the Mitchell Act hatchery production that it funds. Our position is that the Council's interim goal obligated the power system to pay for the production of 2.5 million fish. If those who are responsible for producing the existing 2.5 million fish abrogate that duty, it does not ipso facto become a BPA responsibility. If the Council adds Mitchell Act production to its program and BPA funds it, then the power system must get credit for having produced additional fish toward the 2.5 million for which it is accountable under the interim goal.

Finally, because this would be a new responsibility under the Council's program, the effectiveness of these hatcheries in attaining the interim goal should be compared with other measures of the program and some of the less effective measures should be deferred. We expect this to have two practical results. BPA should make no capital investments in new artificial production facilities until the results of the Yakima, Umatilla, and rehabilitated Mitchell Act hatcheries are known. Also, by deferring lower priority projects, BPA should provide any required funding for the Mitchell Act hatcheries without increasing its existing budget of about $40 million.

4. Sharing the O&M Funding.

Is it feasible to continue federal appropriations and/or provide other sources of funding besides Bonneville funding for a portion of the costs to operate and maintain the hatcheries?

Bonneville: The methodology used to determine the federal/regional split should be simple and straightforward. Hatchery funding should be targeted to specific facilities to avoid comingling of funds. Bonneville is comfortable with an option that would provide appropriations for USFWS to administer and operate it own hatcheries. But future shortfalls in appropriations for those hatcheries should not result in supplementation by Bonneville. As stated previously, Bonneville opposes eventually funding those hatcheries under LSRCP.

Agencies and Tribes: The agencies and tribes agree that there should be a federal share in the funding of the Mitchell Act, but because there is an acknowledged federal mitigation responsibility, it is not reasonable or appropriate to pursue state funding. The federal share should be provided

through federal appropriations to USFWS for funding their own hatcheries. NMFS would continue to fund the passage portion of the Mitchell Act activities. In any draft legislation, a line item authorizing the USFWS to fund the Mitchell Act hatcheries should be included.

The planning, budgeting and evaluation parts of the USFWS funded program should be incorporated into the overall management scheme.

This compromise from full Bonneville funding is a recognition of the historic 80/20 split between hydropower impacts and other benefits of the projects. Mitigation for other users is being accomplished by the funding of other than Mitchell Act hatcheries within the region.

PNUCC: Any decreases in federal taxpayer funding should be replaced from a variety of sources in addition to BPA funds, including state taxes and/or user fees. We agree that funding the Mitchell Act is a federal taxpayer responsibility. However, if the federal government declines to fund these hatcheries, it is in effect declining its continuing responsibilities. In this case, the issue is to what extent and by whom should the hatcheries be funded.

Under certain conditions, we believe it might be appropriate for BPA to fund some of the Mitchell Act hatcheries. Some of those conditions are outlined in this paper. We agree with BPA that its funding go to specific hatcheries to avoid commingling of funds and that the methods used to decide which hatcheries BPA funds should be simple and straightforward.

We believe that if the federal government declines its responsibility to fund these hatcheries, it is basically abandoning them and it may be appropriate for BPA to pick up the funding for those hatcheries that most effectively contribute to the goals of the Council's Fish and Wildlife Program. The other hatcheries could be funded by the states or other beneficiaries. The proportion or number of non-funded hatcheries that BPA might choose to fund could be decided on a number of straightforward bases.

THE NEXT STEPS

The goal of discussions on the future funding of the Mitchell Act hatcheries, of which this paper is a part, is to outline alternatives that might meet with regional consensus. Congress has requested alternatives or a consensus position by early September 1989. To that end, the next steps ought to include the following:

- Circulate this discussion paper, in May and early June;
- Reconvene a discussion group to explore options and conditions in June and July; and
- Complete the details of any acceptable alternative and assure regional consensus in August and early September.

ATTACHMENT 1

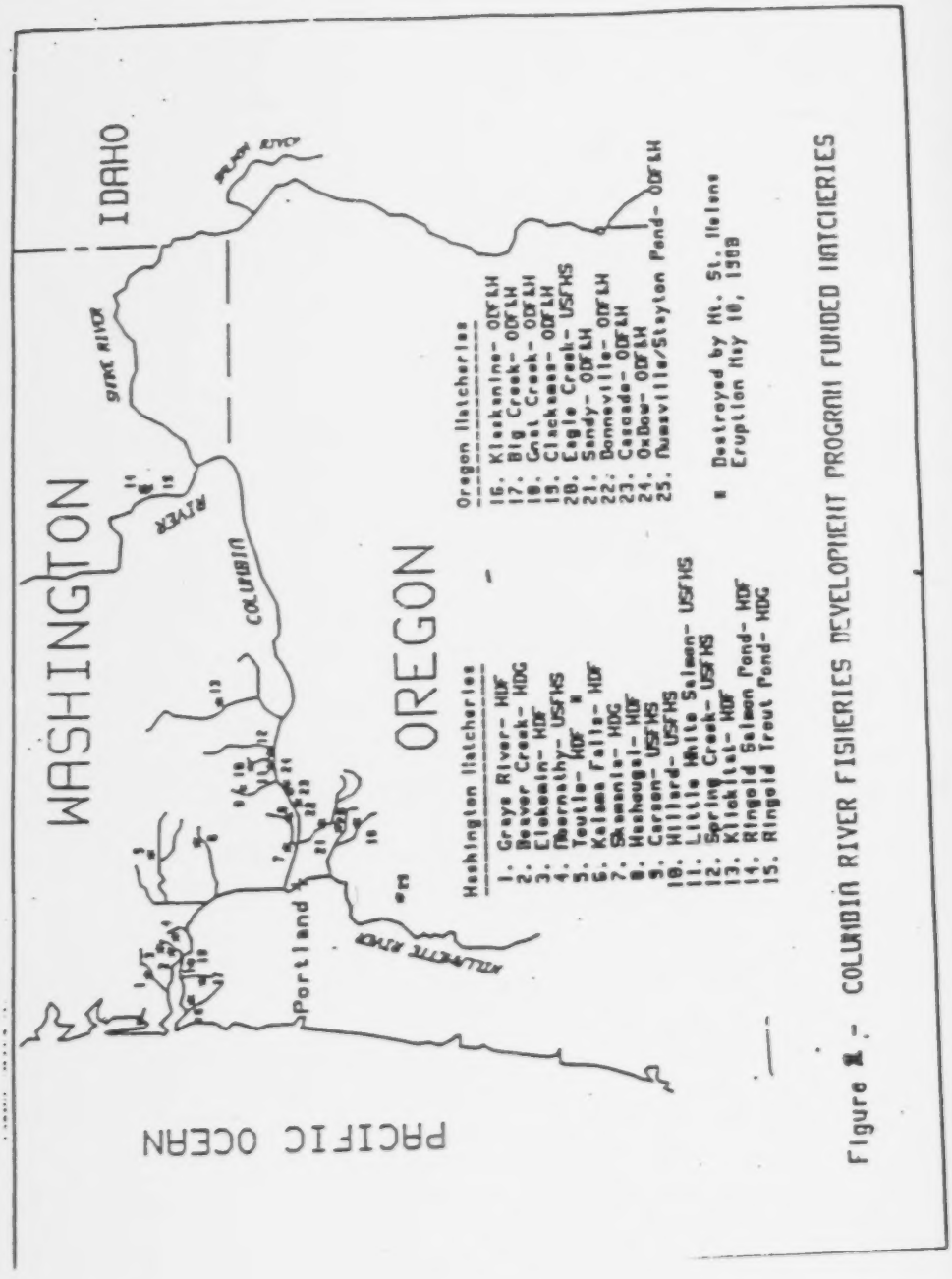


Figure 1 - COLUMBIA RIVER FISHERIES DEVELOPMENT PROGRAM FUNDED HATCHERIES

ATTACHMENT 2

Mitchell Act

To provide for the conservation of the fishery resources of the Columbia River, establishment, operation, and maintenance of one or more stations in Oregon, Washington, and Idaho, and for the conduct of necessary investigations, surveys, stream improvements, and stocking operations for these purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Secretary of the Interior is authorized and directed to establish one or more salmon-cultural stations in the Columbia River Basin in each of the States of Oregon, Washington, and Idaho. Any sums appropriated for the purpose of establishment such stations may be expended, and such stations shall be established, operated, and maintained, in accordance with the provisions of the Act entitled "An Act to provide for a five-year construction and maintenance program for the United States Bureau of Fisheries", approved May 21, 1930, insofar as the provisions of such Act are not inconsistent with the provisions of this Act.

Sec. 2. The Secretary of the Interior is further authorized and directed (1) to conduct such investigations, and such engineering and biological surveys and experiments, as may be necessary to direct and facilitate conservation of the fishery resources of the Columbia River and its tributaries; (2) to construct and install devices in the Columbia River Basin for the improvement of feeding and spawning conditions for fish, for the protection of migratory fish from irrigation projects, and for facilitating free migration of fish over obstructions; and (3) to perform all other activities necessary for the conservation of fish in the Columbia River Basin in accordance with law.

Sec. 3. In carrying out the authorizations and duties imposed by section 2 of this Act, the Secretary of the Interior is authorized to utilize the facilities and services of the agencies of the States of Oregon, Washington, and Idaho responsible for the conservation of the fish and wildlife resources in such States, under the terms of agreements entered into between the United States and these States, without regard to the provisions of section 3709 of the Revised Statutes, and funds appropriated to carry out the purposes of this Act may be expended for the construction of facilities on and the improvement of lands not owned or controlled by the United States: Provided, That the appropriate agency of the State wherein such construction or improvement is to be carried on first shall have obtained without cost to the United States the necessary title to, interest therein, right-of-way over, or licenses covering the use of such lands.

Approved May 11, 1938, amended August 8, 1946
(52 Stat. 345) (60 Stat. 932)

ATTACHMENT 3

Table 1. Funds expended by the Columbia River Fisheries Development Program from 1949 through 1988.

Fiscal Year	Construction	O&M and Studies	Pollution Abatement	Total
1949	$1,000,000	$0	$0	$1,000,000
1950	$1,192,500	$7,500	$0	$1,200,000
1951	$2,118,800	$94,100	$0	$2,212,900
1952	$1,525,500	$150,000	$0	$1,675,500
1953	$2,935,000	$476,900	$0	$3,411,900
1954	$1,750,000	$634,800	$0	$2,384,800
1955	$1,000,000	$1,080,300	$0	$2,080,300
1956	$900,000	$972,500	$0	$1,872,500
1957	$1,400,000	$1,274,100	$0	$2,674,100
1958	$1,600,000	$1,215,100	$0	$2,815,100
1959	$1,600,000	$1,404,500	$0	$3,004,500
1960	$1,200,000	$1,625,200	$0	$2,825,200
1961	$1,400,000	$1,964,400	$0	$3,364,400
1962	$1,431,000	$1,934,100	$0	$3,365,100
1963	$1,608,200	$2,056,600	$0	$3,664,800
1964	$965,700	$2,049,400	$0	$3,015,100
1965	$588,000	$2,273,900	$0	$2,861,900
1966	$968,700	$2,382,800	$0	$3,351,500
1967	$1,050,000	$2,429,000	$0	$3,479,000
1968	$0	$2,599,200	$0	$2,599,200
1969	$420,000	$2,571,800	$0	$2,991,800
1970	$1,048,000	$2,886,000	$0	$3,934,000
1971	$0	$2,939,400	$0	$2,939,400
1972	$0	$3,020,400	$0	$3,020,400
1973	$0	$3,314,000	$0	$3,314,000
1974	$63,400	$3,301,300	$394,500	$3,759,200
1975	$1,095,000	$3,799,800	$495,700	$5,390,500
1976	$781,800	$4,439,100	$500,000	$5,720,900
T.Q. *	$0	$1,179,900	$9,400	$1,189,300
1977	$445,100	$5,007,300	$500,000	$5,952,400
1978	$217,000	$5,646,600	$500,000	$6,363,600
1979	$33,500	$6,111,400	$2,797,000	$8,941,900
1980	$9,100	$6,385,100	$500,000	$6,894,200
1981	$0	$6,821,300	$386,800	$7,208,100
1982	$0	$7,801,900	$0	$7,801,900
1983	$0	$9,583,600	$0	$9,583,600
1984	$190,400	$9,390,000	$0	$9,580,400
1985	$980,000	$8,582,400	$0	$9,562,400
1986	$0	$8,933,700	$0	$8,933,700
1987	$0	$9,155,900	$0	$9,155,900
TOTALS	$31,516,700	$137,495,300	$6,083,400	$175,095,400

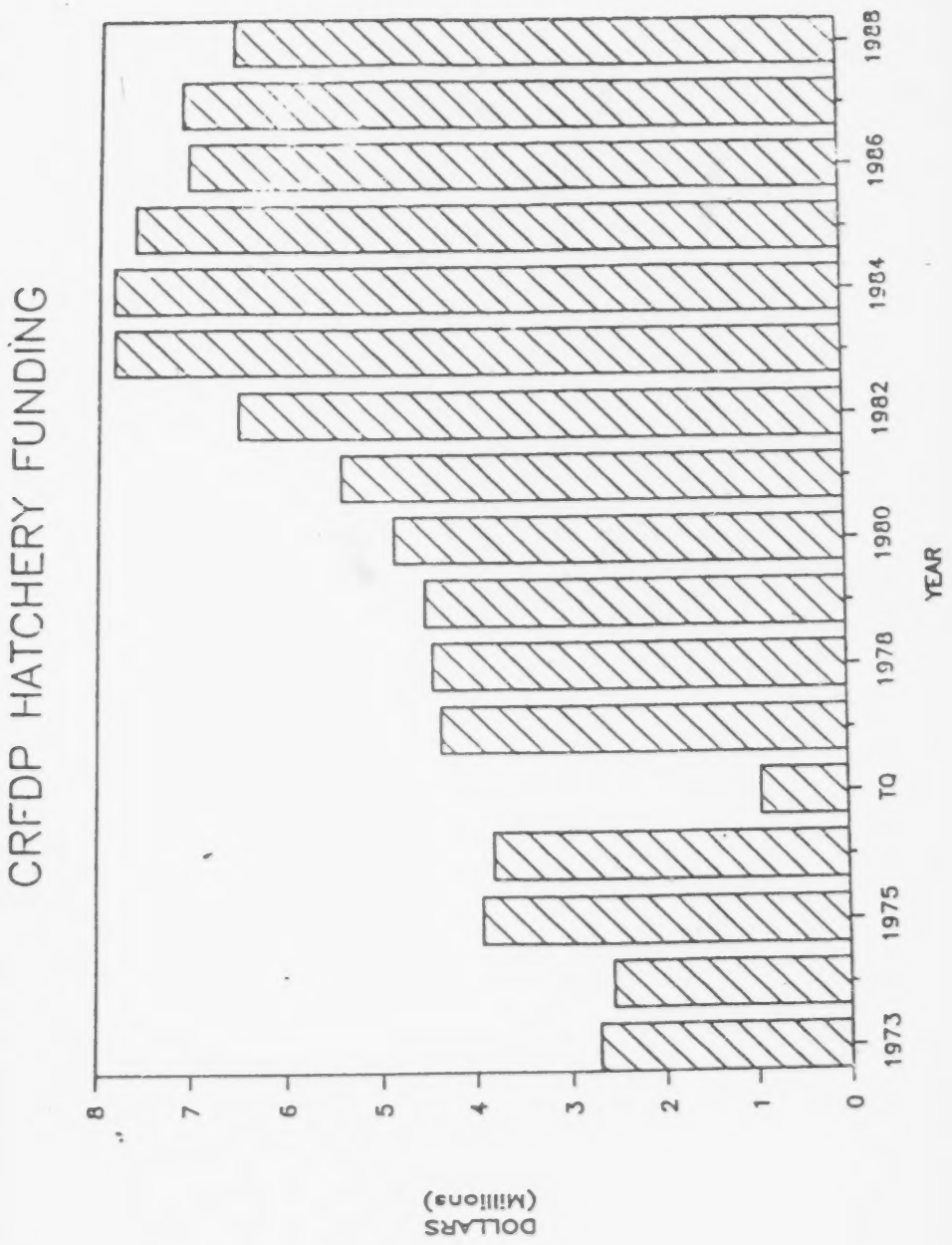
* T.Q. refers to the three month Transition Quarter from July to September necessitated by a change in Federal fiscal year reporting dates.

ATTACHMENT 4

Year	Year	MITCHELL ACT Hatchery O&M Cost (X$1000)*	Implicit Price Deflator**	Factor for 1988$	MITCHELL ACT HATCHERY COSTS Hatchery O&M 1988$ (X$1000)
1973	1973	2706	5.8	2.4465	6620
1974	1974	2559	8.9	2.3123	5917
1975	1975	3933	9.2	2.1234	8351
1976	1976	3813	5.2		
TQ	TQ	945			
1977	1977	4373	5.8		
1978	1978	4463	7.4	1.747	7797
1979	1979	4544	8.7	1.6267	7392
1980	1980	4876	9.2	1.4965	7297
1981	1981	5427	9.6	1.3704	7437
1982	1982	6522	6	1.2504	8155
1983	1983	7836	3.8	1.1796	9243
1984	1984	7846	4.2	1.1364	8916
1985	1985	7620	3.3	1.0906	8310
1986	1986	7060	2.6	1.0558	7454
1987	1987	7130	2.9	1.029	7337
1988	1988	6579		1	6579
Total	Total	$88,232		Averages	$7,629

Source: Source: * NMFS, "Red Book" Aug, 1988 **DRI

ATTACHMENT 5



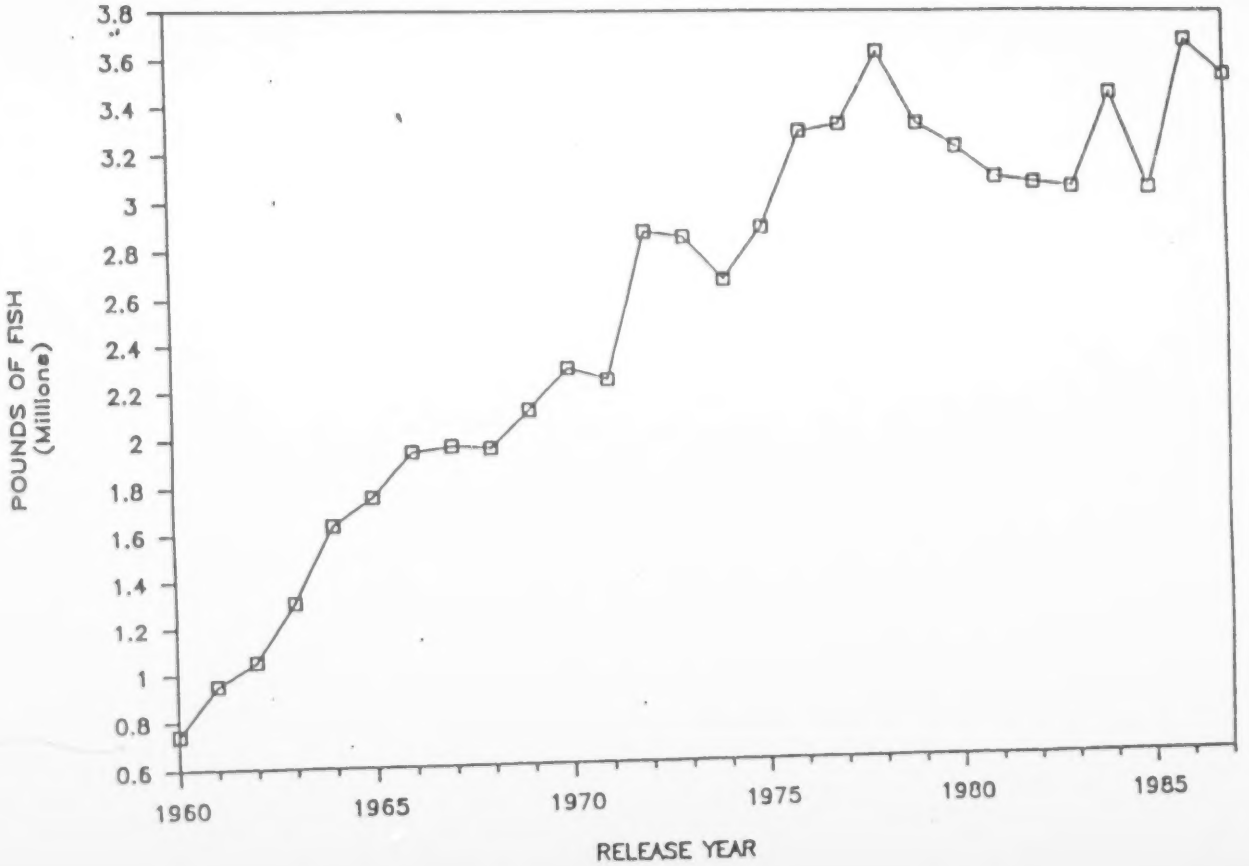
ATTACHMENT 6

(Real Dollars)
(Real Dollars)

Year	Pounds of Product. (X1000)	Price per Pound (1988 $)
1973	2843	2.33
1974	2666	2.22
1975	2882	2.90
1976 TO	3285	
1977	3316	
1978	3628	2.15
1979	3316	2.23
1980	3215	2.27
1981	3086	2.41
1982	3061	2.66
1983	3041	3.04
1984	3448	2.59
1985	3035	2.74
1986	3676	2.03
1987	3523	2.08
1988		
Total	3201	

Source:

TOTAL CRFDP HATCHERY RELEASES



FUNDING ESTIMATES FOR MITCHELL
ACT FISH PROPAGATION PROGRAM USF&WS

		Abernathy	Carson	Eagle Creek	Little White	LCRFHC	Spring Creek	TOTALS
Personal Services	Salaries	$92,475	$181,192	$230,459	$401,000	$9,269	$94,500	$1,008,895
	Benefits	$18,300	$30,292	$47,732	$63,500	$1,104	$23,100	$184,028
	Total PS	$110,775	$211,484	$278,191	$464,500	$10,373	$117,600	$1,192,923
Services/ Supplies	Chemicals							
	Utilities	$19,500	$4,100	$10,000	$27,000	$3,000	$18,200	$91,100
	Other S&S	$13,850	$13,900	$27,509	$90,600	$19,200	$13,300	$178,359
	Subtotal S&S	$33,350	$18,000	$37,509	$117,600	$22,200	$31,500	$269,459
	Sub. PS/S&S*	$144,125	$229,484	$315,700	$582,100	$32,573	$149,100	$1,462,382
	Contract Svs	$12,250			$8,000			$20,250
	Fish Feed	$15,600	$55,000	$81,000	$156,100		$42,900	$350,600
	TOTAL	$171,975	$284,484	$396,700	$746,200	$32,573	$192,000	$1,823,932
Capital Outlay		$8,599	$14,224	$19,835	$37,310	$1,629	$9,600	$91,197
Capital Improvement		$17,198	$28,448	$39,670	$74,620	$3,257	$19,298	$182,393
Indirect of PS /S&S*		$43,238	$68,845	$94,710	$174,630	$9,772	$44,730	$435,925
	GRAND TOTAL	$241,009	$396,002	$550,915	$1,032,760	$47,231	$265,530	$2,533,447
Cost Share								
	NMFS	$241,009	$396,002	$550,915	$1,032,760	$47,231	$265,530	$2,533,447

ATTACHMENT 8A

FUNDING ESTIMATES FOR MITCHELL ACT FISH PROPAGATION PROGRAMS WDW

		Steelhead Kalama	Stock Assessment	Beaver Creek Hatchery	Skamania Hatchery	Vancouver Hatchery Steelhead	Ringold Pond	TOTALS
Personal Services	Salaries	$90,600	$26,900	$100,900	$116,600	$42,200	$35,000	$412,200
	Benefits	$22,000	$6,700	$25,000	$31,000	$10,400	$9,000	$104,100
	Subtotal PS	$112,600	$33,600	$125,900	$147,600	$52,600	$44,[illegible]	$516,[illegible]
Services/ Supplies	Chemicals	$1,000	$0	$15,000	$9,000	$300	$1,[illegible]	$27,[illegible]
	Utilities	$500	$0	$60,000	$22,000	$0	$2,500	$[illegible]
	Other S&S	$17,500	$6,400	$23,400	$20,300	$2,400	$5,800	$75,[illegible]
	Subtotal S&S	$19,000	$6,400	$98,400	$51,300	$2,300	$9,800	$187,[illegible]
	Sub. PS/S&S*	$131,600	$40,000	$224,300	$198,900	$55,[illegible]	$53,[illegible]	$704,[illegible]
Other	Contract Svs.	$700	$10,700	$5,200	$5,600	$300	$1,300	$23,800
	Fish Food	$0	$0	$90,000	$60,000	$18,[illegible]	$14,000	$182,000
	TOTAL	$132,300	$50,700	$319,500	$264,500	$73,[illegible]	$69,150	$909,[illegible]
Capital Outlay		$7,900	$3,000	$19,200	$15,900	$4,400	$4,100	$54,500
Capital Improvement		$0	$0	$32,000	$26,500	$7,400	$6,900	$72,800
Indirect of PS/S&S*		$23,600	$7,000	$26,200	$30,300	$11,[illegible]	$9,[illegible]	$107,200
	GRAND TOTAL	$163,800	$60,700	$396,900	$337,200	$96,[illegible]	$89,[illegible]	$1,144,[illegible]
Cost Share								
	FMFS	$163,800	$60,700	$286,900	$337,200	$96,600	$89,200	$1,034,400

LETTER FROM RANDY FISHER, DIRECTOR, OREGON DEPARTMENT OF FISH AND WILDLIFE

June 1, 1990

Honorable Mark O. Hatfield
United States Senate
Washington, D.C. 20510

Dear Senator Hatfield,

On March 26, 1990 you requested a status report on Columbia River salmon runs that may be subject to petitions for listing under the Endangered Species Act of 1973 (ESA) as amended. The Oregon Department of Fish and Wildlife and the National Marine Fisheries Service have prepared the enclosed information in response to your request. Although this information provides a perspective on the salmon runs in question, it does not provide a basis for definitive judgements on the status of the runs under the ESA.

We share your concern over salmon runs and other users of Columbia River water. We will keep you fully informed as we proceed in carrying out our responsibilities.

Sincerely,

Rolland A. Schmitten
Regional Director
National Marine Fisheries Service

Sincerely,

Randy Fisher
Director
Oregon Department of Fish and Wildlife

Enclosure

PAST AND PRESENT ABUNDANCE

OF

SNAKE RIVER SOCKEYE, SNAKE RIVER CHINOOK,

AND LOWER COLUMBIA RIVER COHO SALMON

A Report Prepared by the Oregon Department of Fish and Wildlife
and the National Marine Fisheries Service
at the request of

The Honorable Mark Hatfield
U.S. Senate

INTRODUCTION

The enclosed information provides a perspective of the historical and present distribution and the relative abundance of spring, summer, and fall chinook salmon and sockeye salmon in the Snake River Basin, and coho salmon returning to tributaries of the Columbia River below Bonneville Dam. This report also contains a brief description of the Endangered Species Act (ESA) activities with respect to these runs of fish.

ENDANGERED SPECIES ACT ACTIVITIES

The National Marine Fisheries Service (NMFS) is responsible for determining whether to list anadromous fishes under the Endangered Species Act (ESA). In February of this year, NMFS initiated a Status Review of sockeye salmon in the Salmon River Basin of Idaho, and announced its intention to collect and review all relevant scientific information available to determine if a listing was warranted. The Shoshone-Bannock tribe subsequently petitioned NMFS to list the sockeye as an endangered species under the ESA. NMFS also intends to review the status of Snake River chinook salmon.

Upon receipt of a petition, NMFS has 90 days to determine whether the petition presents substantial scientific or commercial information indicating the petitioned action may be warranted. Given a positive finding, NMFS must commence a Status Review and determine within 12 months (from receipt of the petition) if the petition action is warranted. If so, a general notice and proposed regulation is published in the Federal Register. Final determinations regarding listing are required within one year of the general notice. Information and comments are solicited from all interested parties, including State and Federal agencies and the public, throughout this process.

ESA STATUS REVIEW ACTIVITIES

Working Reports develped by NMFS have been distributed to recognized experts for critical review. These Reports will 1) provide a rationale to determine if a run of anadromous fish qualifies as a "species" under the ESA, and 2) define biological thresholds for determining if a "species" is threatened (likely to become endangered), or endangered with extinction. In addition, NMFS has formed an Interagency Coordinating Committee (ICC) to assure the timely acquistion of biological information crucial to any Status Review. The ICC met for the first time on May 30, 1990.

The ESA requires NMFS to base any determination regarding the listing of a species on the best scientific information available. Such information should not be expected until the aforementioned actions are complete. Therefore, the information contained in the following report should not be used to form conclusions regarding the biological status of these runs under the ESA.

SNAKE RIVER SPRING CHINOOK SALMON

Historical and Present Basinwide Distribution

Spring chinook historically spawned in tributaries of the Snake River from the lower river tributaries in Washington to the upper tributaries in Idaho and southeastern Oregon (Figure 1). Construction of Brownlee, Oxbow, and Hells Canyon dams blocked passage to all chinook streams in the upper Snake in Idaho and Oregon.

Spring chinook presently exist in the Tucannon River, Washington, the Grande Ronde and Imnaha rivers in Oregon, the mainstem Snake River below Hells Canyon Dam, and the Clearwater and Salmon rivers in Idaho. Spring chinook hatchery programs are ongoing in all the basins. There are numerous agencies and tribes involved in the management of spring chinook salmon in the Snake River Basin and a great deal of specific information is available for each subbasin. Therefore we present subbasin specific spring chinook information for Oregon and Idaho subbasins under separate report sections.

Oregon Spring Chinook Salmon

Historical And Present Distribution

Snake River spring chinook salmon in Oregon occur in the Grande Ronde River and Imnaha River subbasins.

The Grande Ronde River Subbasin historically produced large runs of spring chinook salmon. The fish were distributed throughout the basin with spawning populations occurring in 21 streams. Primary spawning areas included the Wenaha, Minam, Lostine, Wallowa, and upper Grande Ronde rivers and Lookingglass and Catherine creeks.

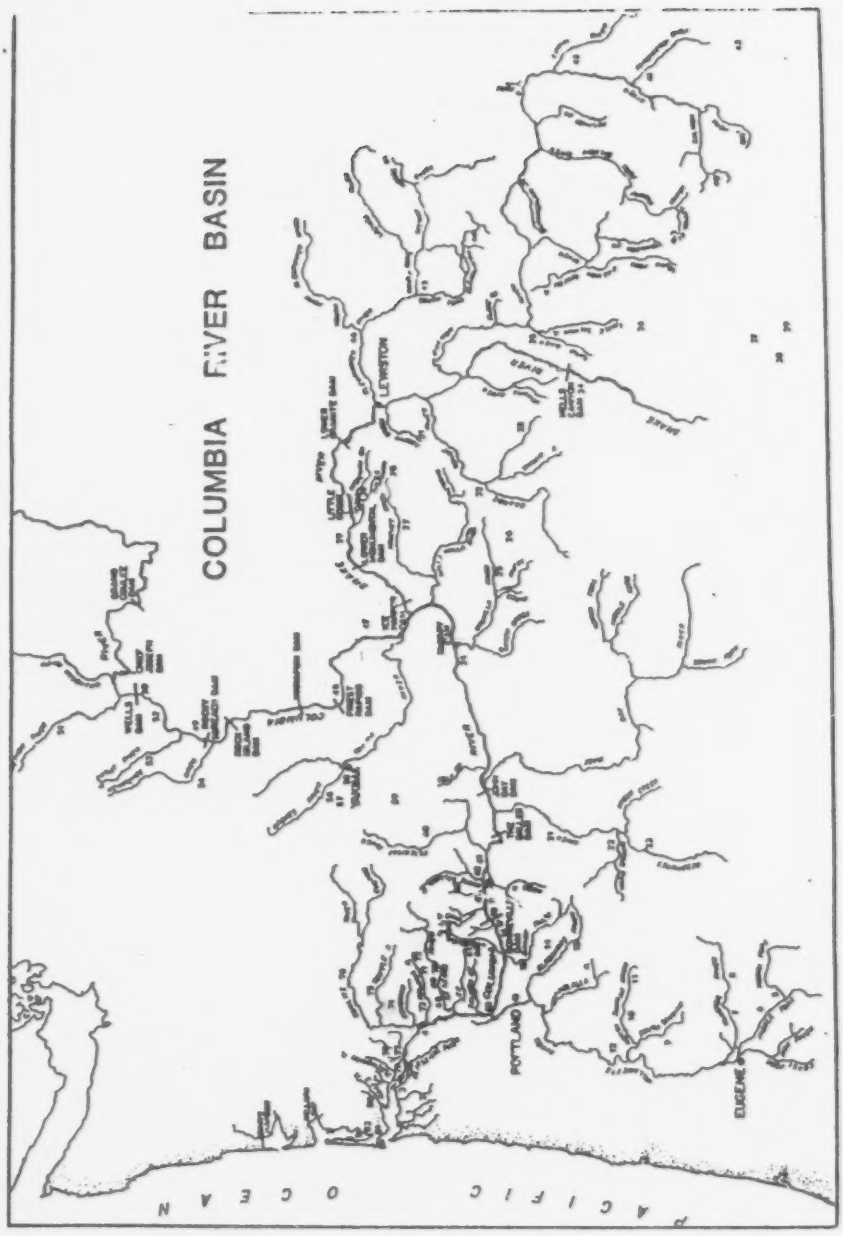


Figure 1. Map of Columbia River Basin. Numbers represent hatchery locations (see Appendix I for hatchery names).

Imnaha spring chinook salmon historically spawned in approximately 45 miles of stream, including the main stem of the Imnaha River, Big Sheep Creek, and Lick Creek. Present spawning distribution of spring chinook salmon has been reduced from the historical distribution as indicated by the absence of spawning adults in Lick Creek in recent years.

Data for spring chinook presented in this report section come from a variety of sources. Annual spawning ground surveys index abundance and comprehensive surveys document distribution of adult spawners.

Historical And Present Harvest

Spring chinook salmon from the Grande Ronde River and Imnaha River subbasins contributed to historic Columbia River sport, commercial, and tribal fisheries as well as tributary sport and tribal fisheries. The Grande Ronde River and Imnaha River subbasins are within the ceded lands of the Confederated Tribes of the Umatilla Indian Reservation and the Nez Perce Tribe, and have long been important areas for tribal fishing. Subsistence harvest has decreased in recent years due to depressed fish runs. Until returns of adults increase from low levels, the tribes and ODFW have agreed that tribal fisheries will be limited in area and number harvested to allow depressed stocks to recover. Sport harvest of spring chinook salmon in the Grande Ronde River Subbasin averaged 450 fish per year from 1959 through 1973, with a peak catch of 1,184 fish in 1966. Sport harvest in the Imnaha River averaged 101 fish per year from 1959 through 1973, with a peak catch of 387 fish in 1960. The sport fisheries for spring chinook in the subbasins have been closed since 1974 in Oregon and 1977 in Washington to conserve the stocks. Tribal fishing has been severely restricted and closed in some years because of the depressed runs in the subbasins.

Columbia River commercial seasons for upriver stocks of spring chinook have been closed since 1977. The only Columbia River fisheries which target on upriver spring chinook are treaty ceremonial and subsistence fisheries above Bonneville Dam. There is some incidental harvest of Grande Ronde and Imnaha spring chinook in both the winter gillnet and sport fisheries for lower river spring chinook below Bonneville Dam.

There is no information on the ocean distribution or harvest of naturally produced Grande Ronde spring chinook salmon. Carson stock spring chinook salmon released in the Grande Ronde River from Lookingglass Hatchery have been recovered from areas north of Columbia River. Imnaha River spring chinook salmon are caught in ocean fisheries south of the Columbia River off California and southern Oregon.

Hatchery Supplementation History

Outplanting of spring chinook salmon in the Grande Ronde River and Imnaha River subbasins has occurred since 1982 under the Lower Snake River Compensation Plan. Objectives are to restore and maintain natural spawning populations of spring chinook and re-establish tribal and sport fisheries.

Supplementation in the Grande Ronde Subbasin has been mainly with smolt releases, but presmolts and adults have also been outplanted. The areas supplemented have been the upper Grande Ronde River (smolts, presmolts, adults), Catherine Creek (smolts, presmolts, adults), and the Wallowa River (adults). There have been few returns to the subbasins from these juvenile releases.

The supplementation method used in the Imnaha Subbasin is to develop a broodstock from the endemic run of spring chinook salmon and to outplant smolts. Returning adults are held for hatchery broodstock or allowed to spawn naturally. This supplementation program is in the early stages of development and the success to date is unknown.

No hatchery outplanting has occurred in the Minam and Wenaha rivers, but adult strays form Lookingglass Hatchery releases of Carson stock spring chinook have been recovered on spawning ground surveys in these two river systems.

Oregon Department of Fish and Wildlife hatchery fish release reports were used to summarize supplementation history. Coded-wire tagging studies were used to determine the success of supplementation.

Historical and Present Abundance

Counts of spring chinook salmon at Ice Harbor Dam (Figure 2) have shown decreases since the late 1960's. These counts do not accurately reflect trends in natural production because hatchery fish have comprised an increasing proportion of the run through time. Grande Ronde River and Imnaha River subbasin escapements (five year averages) are presented in Figure 3. Escapement of spring chinook to the subbasins has been on a decline since the early 1970's.

In 1989 the escapements to the subbasins were some of the lowest on record. Estimated spring chinook spawning escapement in 1989 was 338 fish for the Grande Ronde subbasin and 412 fish for the Imnaha subbasin.

Annual index spawning ground surveys and extensive area spawning ground surveys (1986-89) were used to estimate trends in spawner escapement and distribution. The early escapement estimates only provide an approximation of historical run levels, and accuracy of these estimates is unknown. Studies to quantify actual annual escapements to the Grande Ronde and Imnaha subbasins have been conducted since 1986 under the U.S.-Canada Treaty and will be completed in 1995.

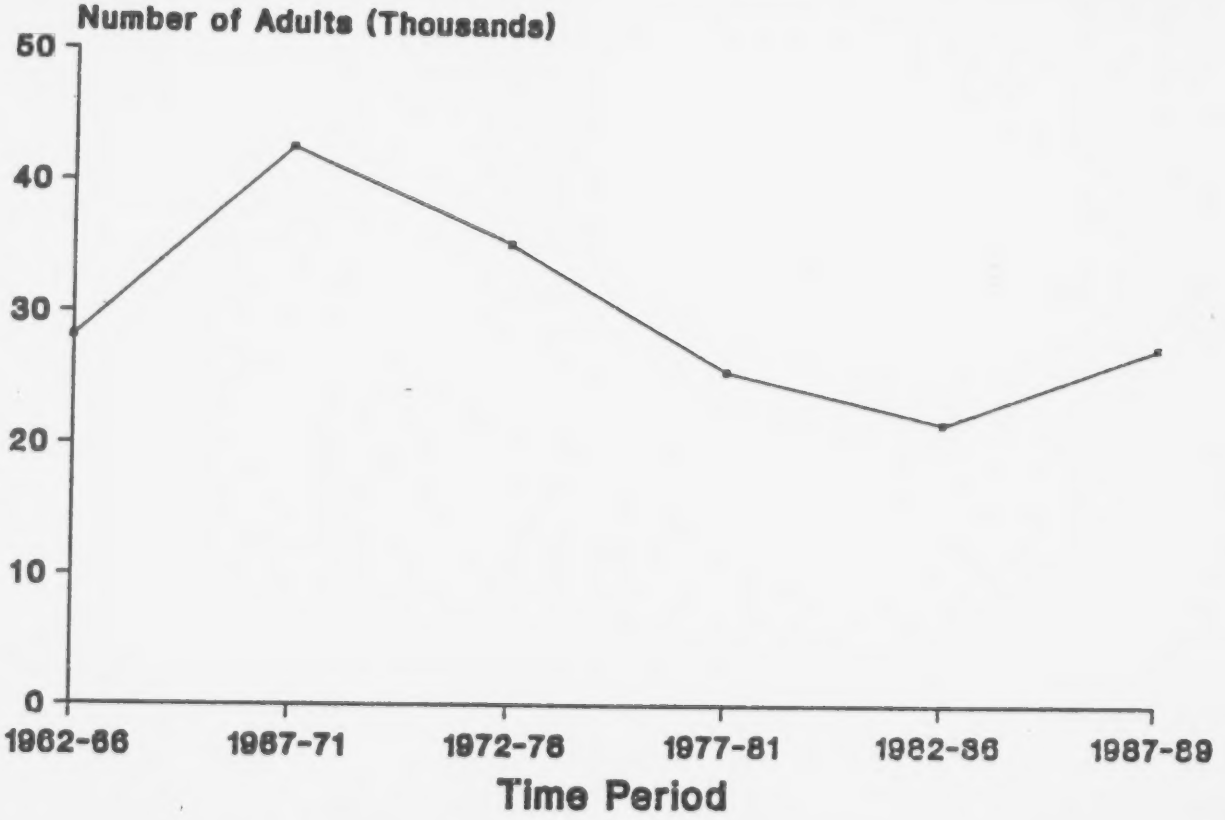


Figure 2. Counts of adult spring chinook salmon at Ice Harbor Dam for the time period 1962-1989.

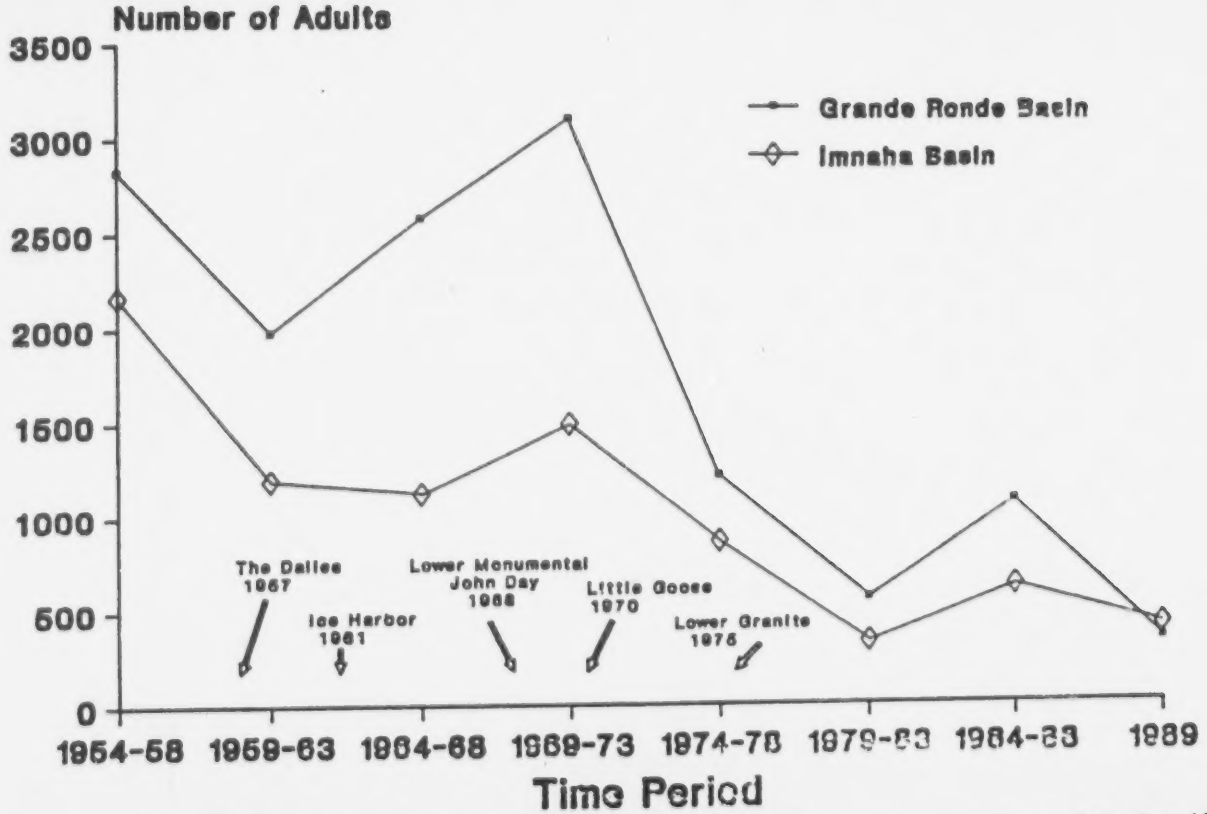


Figure 3. Spring chinook escapement in the Grande Ronde and Imnaha river basins for the time period 1954-1989. Escapement numbers calculated from expansions of index area redd counts. Peak escapement 7,123 for the Grande Ronde basin and 3,439 for the Imnaha basin, both in 1957.

Idaho Spring Chinook Salmon

Historical and Present Distribution

Spring chinook salmon historically spawned in many tributaries of the Snake River from the Salmon River upstream to the Boise River. Construction of Brownlee, Oxbow, and Hells Canyon dams blocked access to vast spawning and rearing areas in the upper basin. In addition, construction of dams in the Clearwater River eliminated native chinook from this subbasin and also blocked passage to the entire North Fork drainage. Range and distribution have been reduced to 66 percent of the original useable area, although 5,300 stream miles of habitat still remain.

Naturally produced spring chinook presently exist in the Salmon River and Clearwater River subbasins. Spring chinook in the Clearwater were reestablished from hatchery introductions. Endemic spring chinook persist in the Salmon River Subbasin. A hatchery run is maintained in the mainstem Snake River with releases at Hells Canyon Dam.

Historical and Present Harvest

Spring chinook salmon were historically harvested in the Salmon River Subbasin by the Nez Perce and Shoshone-Bannock tribes and in the Clearwater Subbasin by the Nez Perce Tribe. The number of fish harvested historically is unknown; however, the historical importance of salmon to the livelihood and culture of these tribes was significant.

In addition to tribal harvest, spring chinook supported an extensive sport fisheries in the Salmon River and to a lesser extent in the Clearwater River. Idaho spring chinook undoubtedly contributed to tribal and non-tribal fisheries in the mainstem Columbia River, but the level is unknown.

Both the Nez Perce and Shoshone-Bannock tribes have placed restrictions on harvest number and locations because of conservation concerns. Because of the depressed run status, fisheries are generally targeted in areas where hatchery fish are available, although some fishing still occurs in other usual and accustomed tribal fishing areas. Present harvest levels are only a small fraction of what occurred historically and the area opened to fishing has been severely limited.

Prior to 1961, statewide sport harvest estimates of spring/summer chinook indicate catches as high as 37,677 fish in 1959. Harvest levels dropped throughout the 1960's and sport seasons in the Clearwater River have been closed since 1978 because of the depressed population status. Sport seasons in the Salmon River Subbasin were closed from

the late 1970's through the early 1980's. Sport harvest presently occurs in the Little Salmon River and targets on Rapid River hatchery fish. Harvest occurs only in years when hatchery surpluses are available. Idaho spring chinook are harvested at low levels (5 to 10% exploitation rate) in the lower Columbia River gillnet and Columbia River tribal fisheries.

Hatchery Supplementation History

Hatchery production in the Clearwater River Subbasin presently occurs at Kooskia and Dworshak National fish hatcheries and additional production will be provided from the new Clearwater Anadromous and Nez Perce Tribe hatcheries. Outplanting to enhance natural production has been ongoing since the early 1970s with a variety of life stages. Rapid River and Carson stocks have been used extensively for supplementation. Much of the production from Clearwater Anadromous and the Nez Perce Tribe hatcheries will be released to provide harvest opportunities and to enhance natural production.

Spring chinook hatchery production for the Salmon River Subbasin occurs at Rapid River and Sawtooth hatcheries, and also previously at Pahsimeroi hatchery. Rapid River hatchery has been in operation since 1964 under the Idaho Power Agreement. This hatchery is primarily used to enhance fisheries in the Little Salmon River and the mainstem Snake (below Hells Canyon Dam), although outplanting to the Clearwater River and increasing use in the Grande Ronde River Lookingglas Hatchery program has occurred. Sawtooth Hatchery and the East Fork facility were constructed to provide harvest opportunities and enhance natural production in the upper Salmon River drainage. These facilities are new and their effectiveness to enhance natural production is undetermined.

Historical and Present Abundance

The best existing information to index natural population abundance in Idaho is annual redd counts in the Salmon River Subbasin. Natural population levels have declined dramatically from the early 1960s to present (Figure 4). Present natural population levels in the Salmon and Clearwater subbasins are severely depressed. The number of redds observed on spawning ground surveys in the Salmon River Subbasin in 1981 was 6% of the peak number observed in 1961. Natural escapement in 1989 was near the lowest observed in history.

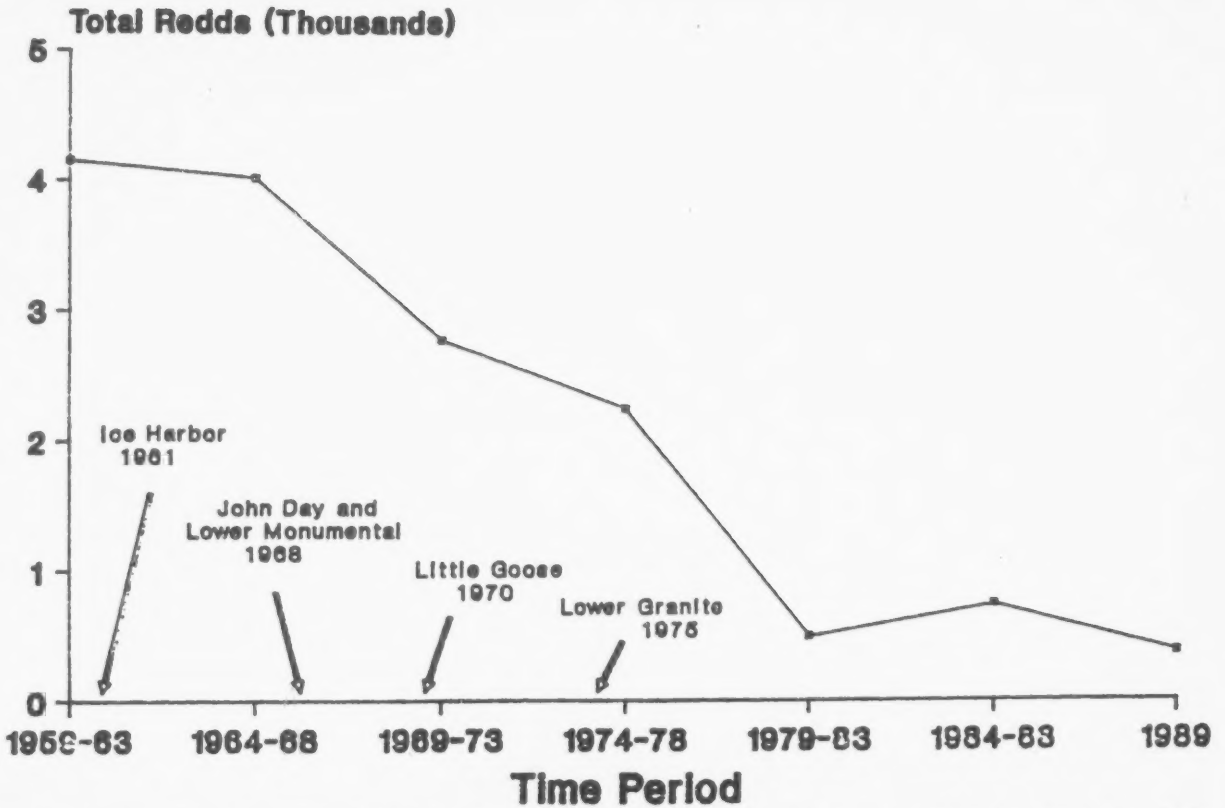


Figure 4. Spring chinook salmon redd counts in the Salmon River subbasin for the time period 1959-1989. Data points are 5-year averages for surveys conducted on 11 different streams. Peak redd count 6,131 in 1961.

SNAKE RIVER SUMMER CHINOOK SALMON

Historical And Present Distribution

Summer chinook salmon historically existed in numerous tributaries of the Snake River in Idaho and Oregon. Construction of Swan Falls, Brownlee, Oxbow, and Hells Canyon dams eliminated access to the tributaries and main stem in the upper Snake River. In Oregon chinook salmon with summer race characteristics exist only in the Imnaha River. These fish have been called spring chinook for many years and are discussed in the spring chinook section. Summer chinook populations exist today in the Salmon River and possibly the Clearwater River subbasins of Idaho and have been eliminated from all other subbasins in the Snake River.

Historically, summer chinook salmon were widespread throughout the Salmon River Subbasin. Summer chinook salmon presently occur in the subbasin in the South Fork Salmon, Pahsimeroi, and Rapid rivers; lower parts of Loon and Big creeks in the Middle Fork Salmon River; Valley Creek in the upper Salmon River; lower East Fork Salmon River; and in the mainstem Salmon River from Ellis to Redfish Lake Creek.

Historical And Present Harvest

Snake River summer chinook historically contributed to commercial, sport, and tribal fisheries in the mainstem. Presently, all target fisheries have been closed and summer chinook are harvested only incidentally in non-target fisheries.

The Nez Perce and Shoshone-Bannock tribes historically fished the Salmon River subbasin in the tributaries of the Middle Fork, South Fork, Little Salmon, and main stem Salmon rivers. The South Fork Salmon River has been a traditional Indian fishery for many years, but limited harvest data is available. Tribal harvest of summer chinook was 150 and 54 fish in 1964 and 1965, respectively. Shoshone-Bannock tribal members harvested 45 and 104 summer chinook in 1987 and 1988, respectively, from the South Fork Salmon River. In recent years tribal fisheries have been restricted because of low population levels.

A sport fishery for summer chinook occurred on the South Fork Salmon River. Harvest of chinook salmon ranged from 1,70[illegible] to 3,900 fish from 1960 to 1964. This sport fishery has been closed for at least the last 10 years. Idaho stocks are harvested in the ocean but the exploitation rate is unknown.

Hatchery Supplementation History

Summer chinook salmon in the Pahsimeroi River have been supplemented by production from Pahsimeroi Hatchery since 1969. The Pahsimeroi Hatchery stock was developed from the endemic run of summer chinook in the Pahsimeroi River. Due to the low number of summer chinook returning to the Pahsimeroi River in 1985, the production was augmented with eggs collected from South Fork Salmon River summer chinook. The hatchery supplementation evolved from a fingerling release program to the present smolt program.

Summer chinook salmon in the South Fork Salmon River have been supplemented by a pilot rearing program in the mid 1970's and production from McCall Hatchery since 1979. The objective of McCall Hatchery is to restore the depleted summer chinook salmon run in the South Fork Salmon River. The hatchery production program has been based on smolt releases. At least one-third of the adults returning to the hatchery trap on the South Fork are passed above the trap to spawn naturally. Natural spawning also occurs in tributaries downstream of the hatchery trap.

Historical and Present Abundance

Counts of summer chinook at Ice Harbor Dam are presented in Figure 5. Salmon River Subbasin redd counts (five year averages) since 1959 are shown in Figure 6. In 1989 only 501 summer chinook redds were counted in the subbasin. Annual escapement to the subbasin averaged 20,000 summer chinook salmon between 1962 and 1970. The summer chinook escapement over Lower Granite Dam was 4,213 fish in 1989, compared to the recent peak of 30,917 observed in 1969.

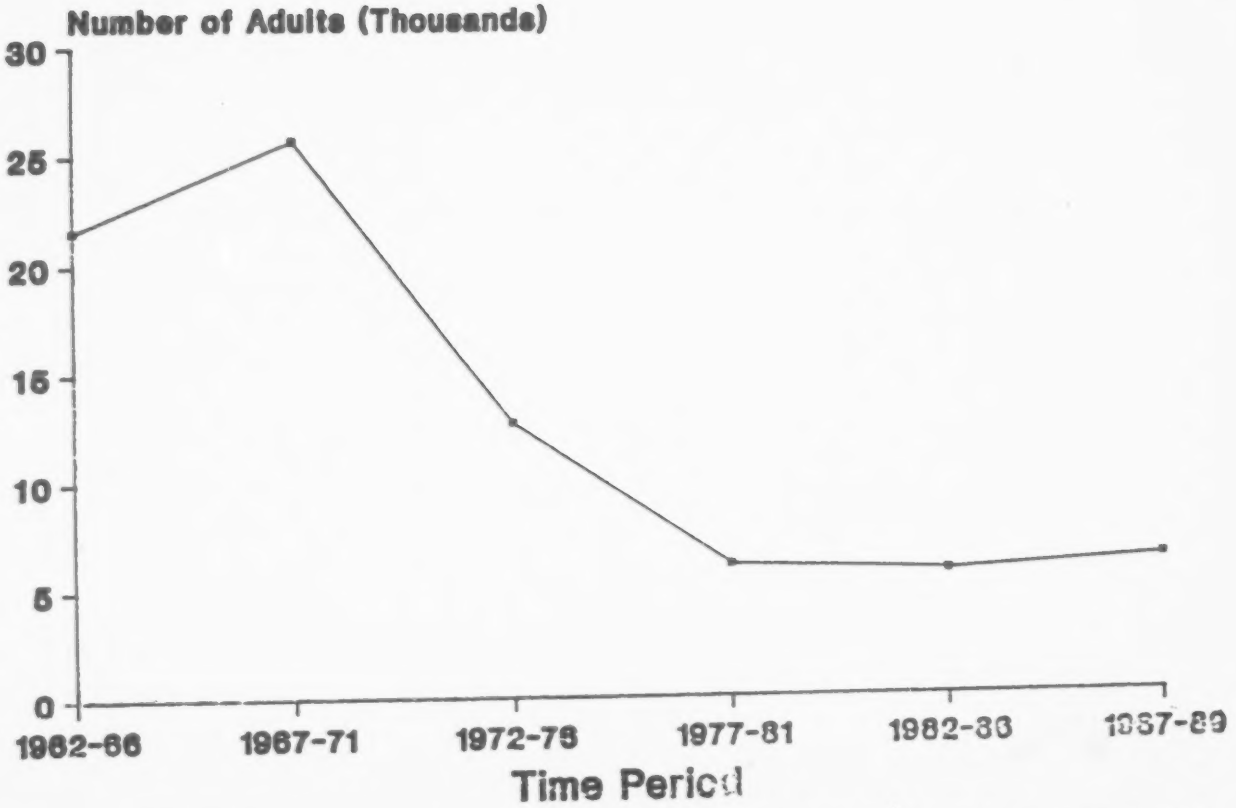


Figure 5. Counts of adult summer chinook salmon at Ice Harbor Dam for the time period 1962-1989.

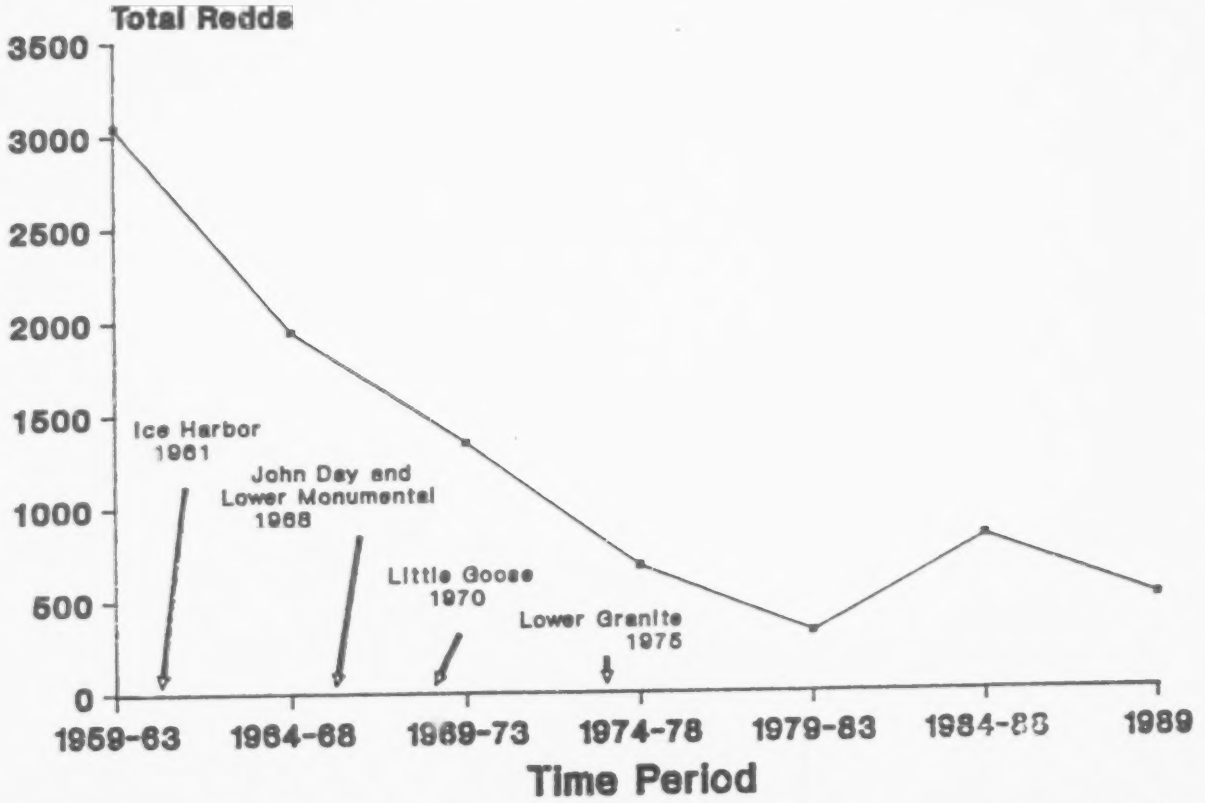


Figure 6. Summer chinook salmon redd counts in the Salmon River subbasin for the time period 1959-1989. Data points are 5-year averages for 7 different streams. Peak redd count 6,850 in 1957.

SNAKE RIVER FALL CHINOOK SALMON

Historical and Present Distribution

Prior to construction of dams on the Snake River, fall chinook spawned in the mainstem from the confluence with the Columbia River to Shoshone Falls and in the major tributaries such as the Tucannon, Grande Ronde, Imnaha, and Clearwater rivers. Construction of Swan Falls Dam in 1901 and Brownlee, Oxbow, and Hells Canyon dams from 1958-1967 eliminated access to all spawning areas in the upper Snake River. The four lower Snake River dams, which were constructed from 1961-1975, inundated the spawning area in the lower 146 miles of the mainstem.

The present spawning distribution in the mainstem is limited to 102 miles in the free flowing section between Lewiston and Hells Canyon Dam. In addition, a very small number of fish spawn in the Tucannon, Clearwater, Grande Ronde, and Imnaha rivers. The present spawning distribution is determined with aerial spawning surveys.

Historical and Present Harvest

Fishery specific harvest information is generally developed based on recovery of coded-wire tagged fish. Although some of these data are potentially available for the period prior to 1983, they have not yet been analyzed. Therefore, it is not possible to present historical harvest information at this time.

It is thought that the present ocean harvest distribution is generally similar to the historic harvest distribution. Based on recoveries of marked fish for 1983 and 1984 brood smolts released from Lyons Ferry Hatchery, Washington, the Snake River fall chinook contribute to sport and commercial fisheries from California to Alaska with greatest contribution in Oregon, Washington, and British Columbia. These fish also contribute to the treaty net fishery in the Columbia River and to a lesser extent the freshwater sport fishery. Overall exploitation rates (ocean plus inriver fisheries) on the 1983 and 1984 broods of Snake River were measured at 78.1% and 78.7%, respectively.

Hatchery Supplementation History

Culture of Snake River fall chinook began in 1977 when 395 adults were taken for broodstock from Ice Harbor Dam. Smolts produced from the 1977-1983 broods were released into the Snake River and also at Kalama Hatchery in the lower Columbia for an egg bank program. Lyons Ferry Hatchery was constructed on the Snake River in 1984 under the Lower Snake

River Compensation Program. The fall chinook program at Lyons Ferry was developed to compensate for adult losses that resulted from construction of the four lower Snake River dams. The goals of the program are to mitigate for the loss of 18,300 adult fall chinook, restore historic fisheries, enhance natural production, and maintain the genetic integrity of the native fall chinook population. The annual smolt production goal is 9,162,000 fish. The hatchery has not achieved full smolt production because of a shortage of broodstock. The largest release to date was 4,713,000 smolts in 1988.

To date all smolts have been released at Lyons Ferry Hatchery to develop an adequate brood source. Adult broodstock are collected at Ice Harbor Dam and at Lyons Ferry Hatchery. When full smolt production is achieved, off-station releases will be made to supplement natural production. In recent years there have been increasing numbers of upper Columbia River fall chinook strays entering the Snake River and many have been spawned with the Snake River stock.

In addition to the LSRCP hatchery program described above, the Idaho Power mitigation agreement calls for an additional smolt release of 1,000,000 fish. However, Idaho Power agreement smolt production has not yet been possible because of egg shortages at Lyons Ferry Hatchery.

Historical and Present Abundance

There are no data sources available to assess historic abundance. The first counts of fall chinook were provided when Brownlee Dam was under construction in 1957 which was well after a significant portion of the habitat had been blocked by Swan Falls Dam. There were 15,160 adults counted at Brownlee in 1957 and 17,848 at Oxbow Dam in 1958. Annual counts began at Ice Harbor Dam in 1962 and the peak count occurred in 1962 at 27,700. Escapement past Ice Harbor Dam was stable through the 1960s and then declined steadily through the early 1980s (Figure 7). There has been a moderate increase in adult escapement for the 1985-1988 years; however this increase is attributable primarily to hatchery returns. Many of the adults that were counted at Ice Harbor Dam from 1984-1989 were collected for broodstock at Ice Harbor Dam or Lyons Ferry Hatchery.

Counts at Lower Granite Dam provide a better index for natural escapement than counts at Ice Harbor Dam because most natural production occurs above Lower Granite. Escapement past Lower Granite has been very low (Figure 8) since counting began in 1975. The adult escapement for the 1983-1989 run years was below 1,000. Prior to 1988 most of

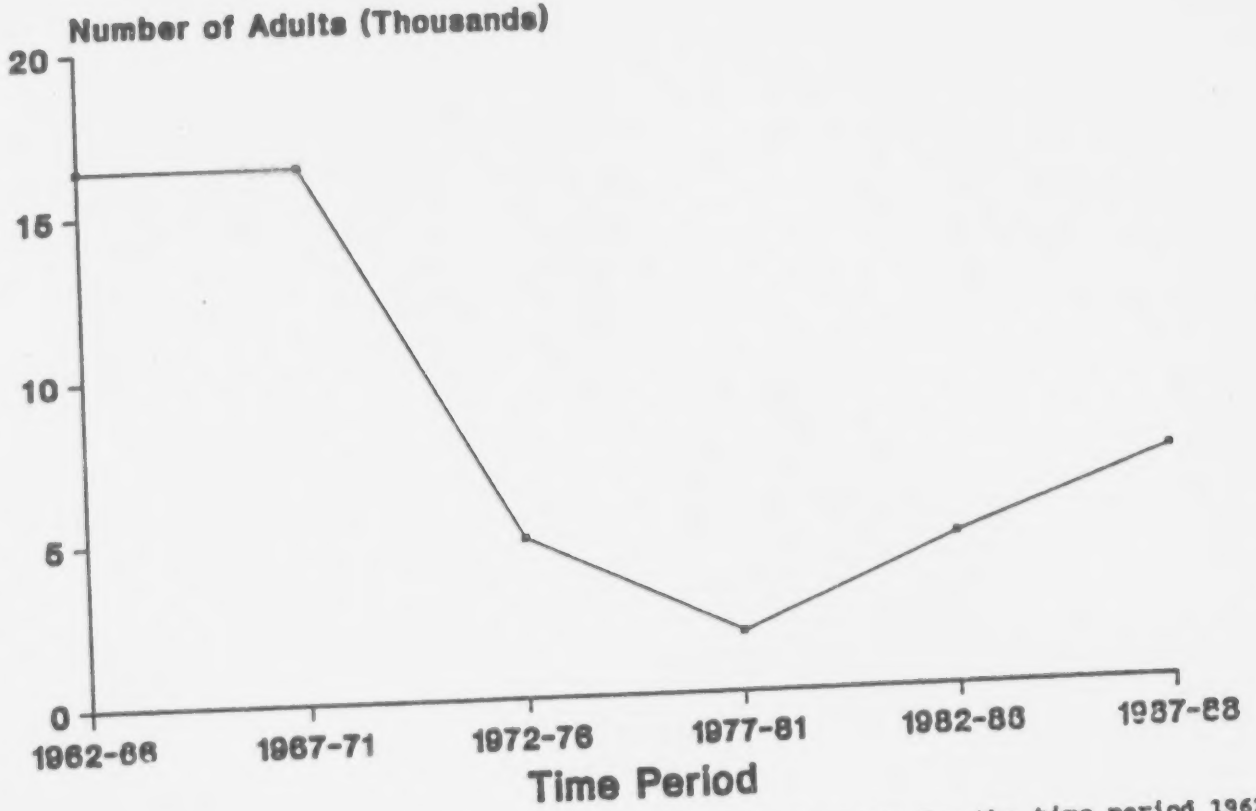


Figure 7. Counts of adult fall chinook salmon at Ice Harbor Dam for the time period 1962-1988.

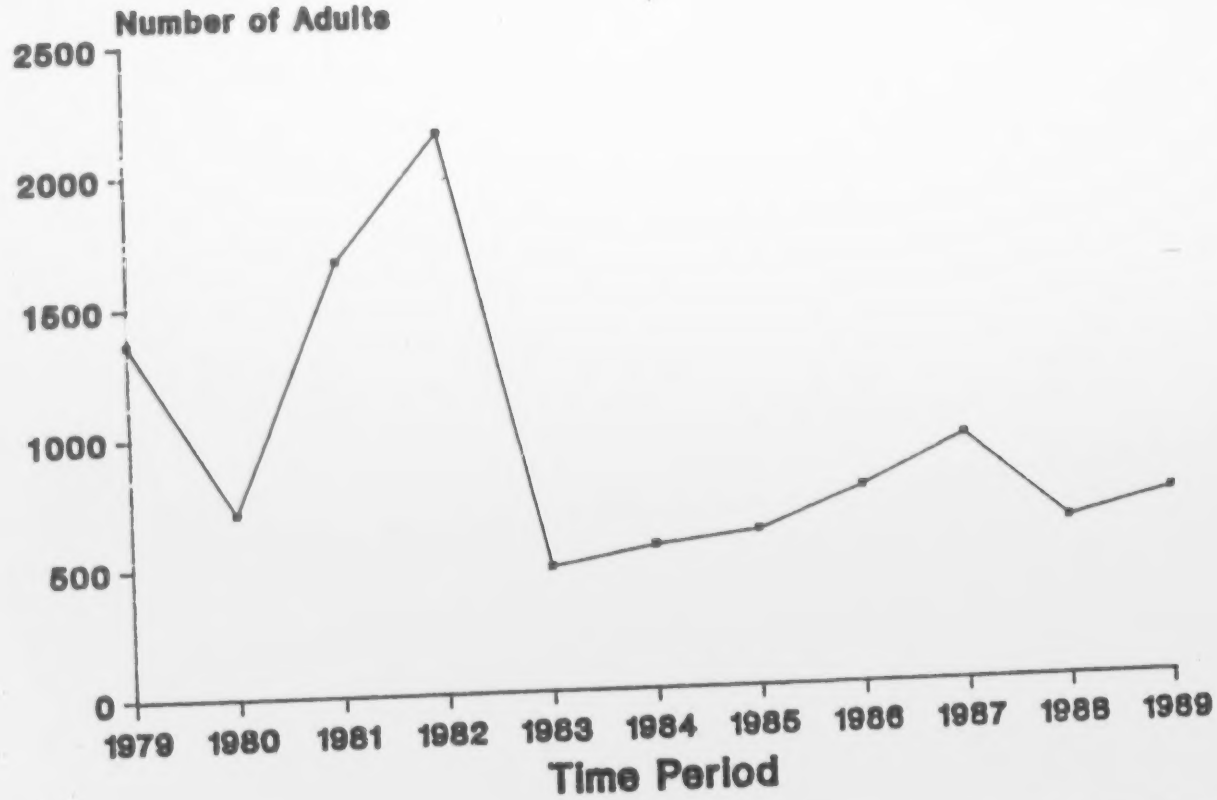


Figure 8. Counts of adult fall chinook salmon at Lower Granite Dam for the time period 1979-1989.

the fish escaping above Lower Granite Dam were believed to be wild fish. However, in 1988 and 1989 sampling of adults for fin marks revealed an increasing level of stray hatchery fish passing over Lower Granite Dam.

SNAKE RIVER SOCKEYE SALMON

Historical and Present Distribution

Historic accounts describe runs of sockeye salmon of up to 3 million fish returning to the Columbia River Basin. The surface area of nursery lakes available today is only 4% of that before construction of Columbia and Snake River dams. Of the eight primary lake-riverine systems in the basin that contributed a majority of fish to sockeye salmon runs in the early 1900's, only three populations remain. Adult sockeye salmon presently spawn in the Okanogan and Wenatchee River systems in the upper Columbia River, Washington, and the Salmon River system, Idaho.

Historical and Present Harvest

The historic harvest of sockeye salmon in the ocean is undocumented and is considered small. Ocean harvest of present-day runs is considered negligible off the west coast of the United States. The migrational patterns in the ocean for sockeye from the Columbia River are unknown.

Sockeye salmon were harvested extensively in commercial fisheries of the Columbia River. According to historic records, commercial harvest of sockeye salmon in the Columbia River in the 1890's exceeded 4.5 million pounds. The existence of commercial canneries in the 1890's, such as the one near Wallowa Lake, are an indication of the abundance of sockeye salmon in the tributaries of the Snake River. Regional Indian tribes from Washington, Oregon and Idaho have utilized this species for fisheries through the centuries. Historic data to quantify the number of fish or percentage of the runs harvested are not available.

Data to quantify exploitation rates on the sockeye salmon population of Redfish Lake are not available. No fish have been coded-wire tagged to determine origin. Exploitation rates of sockeye salmon in the Columbia River have been highly variable, ranging from 0 to 86 % from 1938 to 1989. Harvest levels are currently regulated under the Columbia River Management Plan to rebuild weak runs in the Wenatchee and Okanogan River systems. Harvest is managed according to estimated size of the run and targets for escapement to the Wenatchee and Okanogan Rivers. Commercial fishing below Bonneville Dam was closed from 1973 to 1982 due to small run sizes. Exploitation rates since 1982 have ranged from 3 to 49%. It is likely that Snake River sockeye salmon migrate at a similar time through the Columbia as the upper Columbia stocks and are therefore harvested at similar rates.

Historical and Present Abundance

No historical data are available for estimating the number of sockeye salmon returning to the Snake River prior to construction of Ice Harbor Dam. The number of adults returning to the Wallowa Lake area is presumed to have been very large, as evidenced by the presence of canneries in the 1890's. Historic accounts of the lakes at the headwaters of the Salmon River before 1900 report the area as important spawning grounds for sockeye salmon. Lakes and streams in the Stanley Lake basin were described as being "teeming with redfish", but the size of the population was not estimated. From 1913 to 1934 Salmon River sockeye were thought to be blocked by dams from entering most spawning areas. It is uncertain if the source of these recent runs were existing kokanee populations (landlocked sockeye).

Escapement of sockeye salmon to the Snake River has declined dramatically. Yearly counts at Ice Harbor Dam have dropped from 1276 in 1964 to 4 in 1989. Fewer than 70 fish have been observed each year in the past five years. Data collected between 1954 and 1966 by IDFG from a weir near Redfish Lake suggests a similar decrease after 1955 (Figure 9). IDFG estimated the number of fish spawning in Redfish Lake for the years 1981 - 1984 was 26, 50, 0, and 22 respectively, indicating that the run was at very low levels.

Hatchery Supplementation History

Past attempts to supplement sockeye populations of the Snake River have been unsuccessful. The Oregon Department of Fish and Wildlife reported collecting and spawning returning adults in the lower Grande Ronde in 1902, and upstream in the lower Wallowa River in 1903 in an attempt to supplement the Wallowa Lake population. Plantings of eggs and juveniles below Wallowa Lake were unsuccessful. IDFG reports recent undertakings to re-establish populations in the Stanley and Alturas Lake systems with fry from eggs supplied from Canada. The department released 174,000 to 631,000 fry each year from 1981-1984 at which time this program was discontinued. Attempts by IDFG to supplement the Redfish Lake stock with a hatchery program have been unsuccessful.

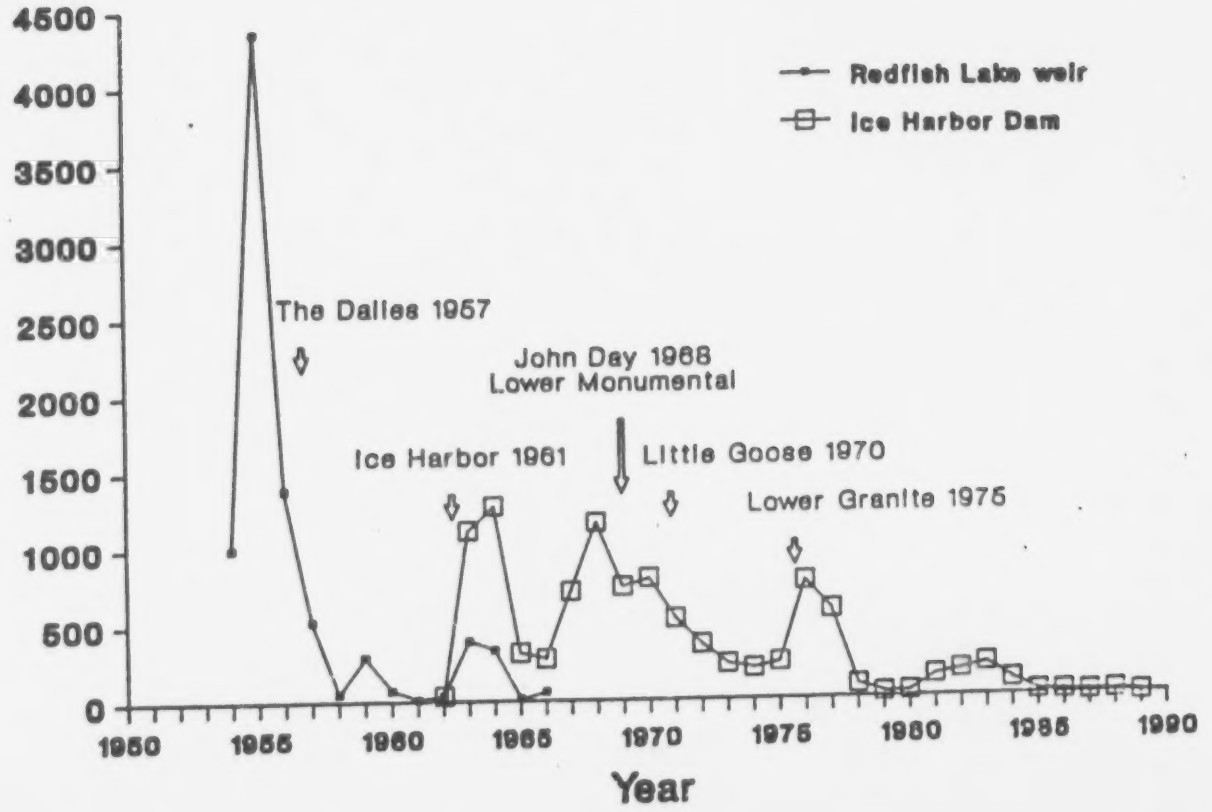


Figure 9. Counts of sockeye salmon at Red Fish Lake weir (1954-1966) in the Salmon River subbasin and at Ice Harbor Dam (1962-1989).

LOWER COLUMBIA RIVER COHO SALMON

Historic and Present Basinwide Distribution

Coho salmon formerly spawned upstream to the Spokane River in the Columbia River and to the Grande Ronde River in the Snake River, but were principally found in tributaries of the lower Columbia River below Bonneville Dam. Wild coho salmon above Bonneville Dam have essentially disappeared and the few remaining runs exist in tributaries below Bonneville Dam at the present time. Primary production areas in Washington included the Grays, Elokomin, Cowlitz, Toutle, Kalama, Lewis, and Washougal rivers. In Oregon, coho salmon were primarily produced in the Lewis and Clark River, Youngs River, Klaskanine River, Big Creek, Gnat Creek, Clatskanie River, Beaver Creek, Milton Creek, Scappoose Creek, Clackamas and Sandy rivers. The largest production of coho salmon historically occurred in the Cowlitz and Lewis rivers in Washington.

Naturally produced coho salmon currently persist in accessible tributaries of the lower Columbia River within their historic range of distribution. It is unknown if they are genetically different from existing hatchery coho, however for the purposes of this report they will be described as wild fish.

Historical and Present Harvest

The earliest regular statistical indicators of coho salmon harvest in the Columbia River began in 1892 when cannery records specified species. Cannery records are the only measure of harvest prior to 1923. The cannery pack averaged 362,000 coho salmon from 1892 through 1922 and ranged between 32,000 and 758,000 fish. These are minimal estimates of total harvest because they do not include dried fish products, fresh fish, or the Indian harvest. Beginning in 1921, a tax was assessed on all salmon landed in Oregon and fish dealers were required to report their landings in conjunction with this assessment in 1923. From 1923 through 1930, the commercial fishery in the Columbia River landed between 416,000 and 888,000 fish each year. Following 1930, landings steadily declined to only 18,000 fish in 1960. Landings prior to 1960 primarily represent the production of wild coho salmon in the Columbia River basin. After 1960, hatchery fish became increasing important in the total catch as wild production continued to decline.

The ocean troll fishery in Oregon began in 1912 and rapidly developed in the intervening years. The earliest records from the troll fishery begin in 1923. Recorded landings from the troll fishery contained a mixture of stocks from

Pacific Coast states and provinces and no specific est are available of the contribution of Columbia River coh salmon.

Lower Columbia River coho salmon currently contribute to the ocean troll and recreational fisheries, primarily off the coasts of Washington, Oregon, and California, and to the inriver gill net and recreational fisheries in the lower Columbia River. The Buoy 10 recreational fishery has rapidly developed in the 1980s and has taken up to 143,800 coho salmon in 1988. The gill net fishery below Bonneville Dam has averaged about 220,000 fish from 1961 through 1989. The inriver fisheries have primarily harvested hatchery fish in recent years. Exploitation rates from combined ocean and inriver fisheries have commonly ranged between 85% and 94% since 1969.

Hatchery Supplementation

A large network of federal and state hatcheries has been established on the lower Columbia River to supplement the declining runs of wild fish from the basin. Since 1970, hatchery returns (after fisheries) have averaged 125,400 adults and ranged between 37,100 in 1977 and 284,100 in 1986. About 30 million hatchery smolts are liberated into the Columbia River at the present time.

Hatchery presmolt and fry releases into lower Columbia River tributaries from the volunteer Salmon and Trout Enhancement Program (STEP) have been increasing in recent years. Presmolt releases into selected streams utilized for spawning fish surveys have resulted in higher pool densities of juveniles in late summer than found in streams that were not stocked. However, there is no evidence that adults returning to these streams have increased in the interim.

Trends in Abundance

Annual spawning fish survey counts have been conducted in lower Columbia River tributaries since 1949 to index the abundance of spawning coho salmon in Oregon. The estimated escapement of wild coho salmon above North Fork Dam, Clackamas River, has been obtained since 1958 from counts made by Portland General Electric Company. The abundance of juvenile coho salmon in 10 tributary streams was monitored from 1979 through 1985.

Spawning Fish Surveys: Peak counts of spawning coho salmon in standard index streams were used to analyze trends in the abundance of coho salmon (Figure 10). Between 1949 and 1968, there was no discernible upward or downward trend in

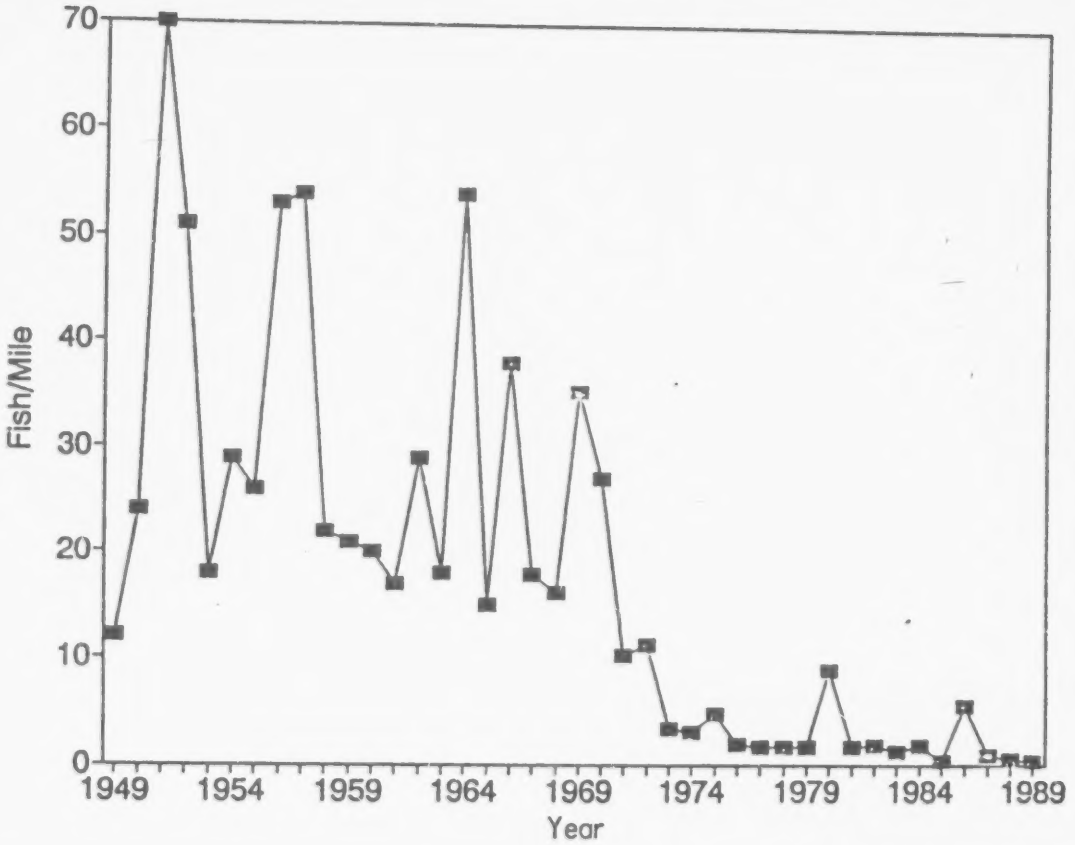


Figure 10. Trend in the escapement (average peak count/mile) of coho salmon in lower Columbia River tributaries since 1949.

escapement, although considerable annual fluctuations occurred during the interim. From 1969 through 1977, there was a significant collapse in the population. During this 9-year period, the run declined at an average annual rate of 32.1% per year and has remained at very low levels ever since that time.

Clackamas River: The escapement of wild adult coho salmon above North Fork Dam on the Clackamas River is illustrated in Figure 11. Between 1958 and 1965, only wild fish passed the dam. Beginning in 1966, hatchery fish began to return to the dam from smolts released above the dam.

The number of wild coho salmon returning to North Fork Dam has remained fairly static even though the peak arrival time shifted 2 months from November to January (Figure 12). There is no evidence that the population of wild coho salmon in the Clackamas River has declined commensurate with the loss of stocks in tributaries farther downstream.

Juvenile Abundance: Mean counts of juvenile coho salmon in 10 index streams utilized for adult coho salmon spawning surveys are available from 1972 through 1985. The average count per pool of juveniles seined in these index streams has declined from 19 juveniles/pool in 1972-73 to about 8 juveniles/pool in 1982-85. Fully stocked lateral scour pools in Oregon coastal streams average 81 juveniles/pool. Lateral scour pools are the most common type of habitat found in coastal streams. When compared to pool densities found in Oregon coastal streams, the lower Columbia River tributaries appear to have rearing densities that are 10% of the optimum carrying capacity assuming that lateral scour pools also predominate in these tributaries. The depressed level of juvenile production is consistent with the steep decline in adult coho salmon returning to spawn in lower Columbia River tributaries in recent years.

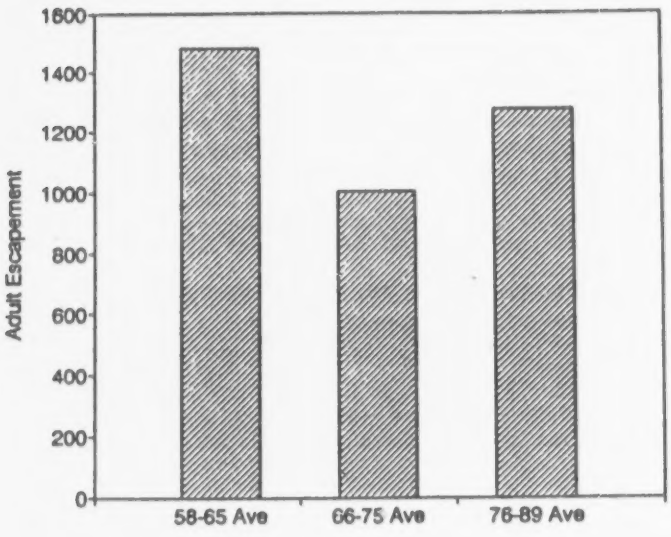


Figure 11. Estimated "late-run" adult coho salmon passing North Fork Dam, Clackamas River, 1958-1989.

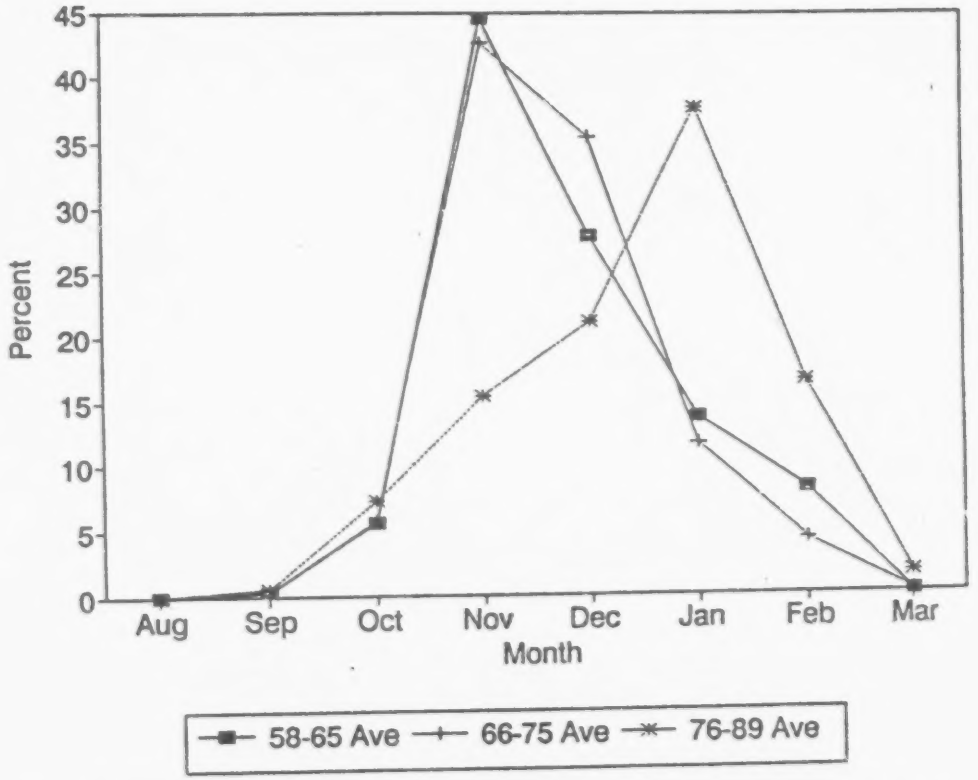


Figure 12. Comparison of average number of adult wild coho salmon passing North Fork Dam, Clackamas River.

APPENDIX I

KEY TO SALMON AND STEELHEAD HATCHERY FACILITIES

1. Klaskanine
2. Big Creek
3. Gnat Creek
4. Trojan
5. Willamette
6. Dexter Pond
7. McKenzie
8. Leaburg
9. South Santiam
10. Roaring River
11. Marion Forks
12. Aumsville-Stayton Pond
13. Clackamas
14. Eagle Creek NFH
15. Sandy
16. Wakeenha
17. Bonneville
18. Cascade
19. Oxbow
20. Herman Creek Pond
21. Oak Springs
22. Warm Springs NFH
23. Round Butte
24. Irrigon
25. Minthorn
26. Bonnifer Springs Pond
27. Dayton Pond
28. Curl Lake Pond
29. Lyons Ferry
30. Tucannon
31. Cottonwood Pond
32. Lookinglass
33. Wallowa
34. Oxbow (Idaho Power Co.)
35. Rapid River
36. McCall
37. Niagara Springs
38. Magic Valley
39. Hagerman NFH
40. Sawtooth
41. Pahsimeroi
42. McKay
43. Hayden Creek
44. Red River Rearing Pond
45. Kooskia NFH
46. Dworshak NFH
47. Ringold Rearing Ponds
48. Priest Rapids
49. Turtle Rock Pond
50. Wells Dam Facilities
51. Winthrop NFH
52. Chelan P.U.D.
53. Entiat NFH
54. Leavenworth NFH
55. Rocky Reach
56. Nile Springs Rearing Pond
57. Naches
58. Yakima
59. Yakima (proposed tribal)
60. Klickitat
61. Big White Salmon Pond
62. Spring Creek NFH
63. Little White Salmon NFH
64. Carson NFH
65. Willard NFH
66. Skamania
67. Washougal
68. Lewis River
69. Lewis River (proposed)
70. Speelyai
71. Kalama Falls
72. Gobar Pond
73. Lower Kalama
74. Alder Pond
75. Toutle (pre-eruption)
76. Cowlitz
77. Abernathy NFH
78. Elokomin
79. Beaver Creek
80. Grays River
81. Sea Resources (private)
82. Weyco Pond
83. Vancouver

Senator HATFIELD. Now, let me just address the procedure briefly. As you see, you will be speaking in panels. Now, let me assure you that that does not mean that you need to approve or give approval to everything else said on that panel. Your testimony will be considered on individual bases. If you feel you do not agree with the views of your fellow panelists, do not be unhappy about that. It may help us in developing long relationships. The panels will be called and staff will collect your witness statements, if you will hold them until the panel is called.

Now, even if you are not testifying, or if you are not on a panel, we still welcome your input. If you have documents or statements that you have put together, feel free to make that available to our staff and we will incorporate them in the record. This record will be kept open until July 16. So anyone who wants to have their views and statement in the record and does not have them here today, will still have time to submit your statement; we will receive your information for the record up until July 16.

Then for any of you who wish to get a copy, once the record is transcribed and compiled, we will provide you with a copy of that record once we are able to publish it. And if you will leave your name and address, or contact my office or Congressman's Wyden's office or Congresswoman Unsoeld's office, we will make that available.

We would like to have all oral testimony limited to 5 minutes. We will incorporate the full statement in the record, so you need only make a highlight or summary of your statement within that 5-minute period. There is a system to assist you. The green light will proceed to be turned on once you begin. When you look at the red light, that means wind it up; you are on the conclusion: "In final summary, I'd like to say."

Now, usually in these procedures I invite the Governors' testimony first, or his representative or her representative. But today I am not going to follow that for one reason. I am going to ask Mr. Rolland Schmitten, who is the Regional Director of National Marine Fisheries Service, to come forward and outline today as sort of the launching pad, the process he intends to follow in order to comply with the Endangered Species Act; and then we will turn to the Governors' representatives. And in the case of Mr. Schmitten and the Governors, the 5-minute rule does not apply. So if you will come forward.

Thank you for being here today. We are happy to not only have you here, but also for the help you have been to us over the years. You have been an outstanding servant.

STATEMENT OF ROLLAND A. SCHMITTEN, DIRECTOR, NORTHWEST REGION, NATIONAL MARINE FISHERIES SERVICE

ACCOMPANIED BY MERRICK TUTTLE, ENDANGERED SPECIES COORDINATOR, NORTHWEST REGION

Mr. SCHMITTEN. Thank you very much, Senator Hatfield, Congressman Wyden, my very long friend, Congresswoman Unsoeld. We thank you for inviting us here today. We will discuss the National Marine Fisheries Service role in implementing the Endangered Species Act. I am Rolland Schmitten. I am the regional direc-

tor for the Northwest region of the National Marine Fisheries Service. With me today is Mr. Merrick Tuttle who is the Northwest Region Endangered Species Coordinator.

National Marine Fisheries Service is part of the National Oceanic and Atmospheric Administration [NOAA], and is within the Department of Commerce. The National Marine Fisheries Service has responsibility for living marine and estuarine resources and anadromous fish.

I will address three main items today. First, the actions that have led to our review of certain stocks of salmon under the Endangered Species Act [ESA]; second, the legal requirements of the ESA; and third, the actions that National Marine Fisheries Service has taken to date to carry out its obligation and the review process we have developed.

National Marine Fisheries Service responsibility and petitions received—NMFS is responsible for ESA actions regarding marine fish and certain marine mammals. Since some species of fish, such as anadromous fish, occur in both fresh and marine waters, a memorandum of understanding between the U.S. Fish and Wildlife Service and National Marine Fisheries Service was developed to designate the agency responsible for ESA action on those species. Under the memorandum of understanding, NMFS was made responsible for salmon and steelhead.

Within the past 3 months, NMFS has received five petitions that list certain Columbia and Snake River salmon stocks under the Endangered Species Act. First, on April 2, 1990, a petition was received from the Shoshone-Bannock Indian Tribes to list sockeye salmon in the Idaho Snake River. Then on June 7, 1990, four petitions from Oregon Trout and other copetitioners to list Snake River spring, summer, and fall chinook and lower Columbia River coho salmon. I have some illustrations. Rather than going back and forth, I will save that to the end.

The legal actions required under the ESA. Once NMFS receives a petition to list a species or population, the ESA requires specific actions with regard to the listing process. Briefly these acts are: NMFS must acknowledge receipt of the petition within 30 days. Then within 90 days of receipt, NMFS must announce whether the petition presents substantial scientific and commercial information that the listing may be warranted. If the petition is found to present such information, NMFS must promptly commence a status review, biological review of the species concerned. That status review must be based solely upon biological information relating to the species in question. All time references are based upon the date that the petition is received by the Secretary of Commerce or his designee.

Then if a petition is accepted and a review of the status of the stock is conducted, finally within 1 year of receiving the petition, the Secretary—I have made a correction here: the Secretary must determine whether the petition action is warranted. If a listing is warranted, the Secretary or his designee must promulgate a proposed rule to implement the listing action. Within 2 years of receiving the petition or 1 year after the proposed rule, the Secretary must financially determine whether the species is threatened or endangered and promulgate a final rule.

Actions undertaken by NMFS to date on petitions. A number of actions involving anadromous fish have occurred recently in the Pacific Northwest. In February, my staff independently began an informal status review of sockeye salmon on the Snake—on the Salmon River, which is a tributary of the Snake.

This was a proactive move to perform a biological review and then, in a more genial fashion, work with the river constituents. This is very much like, and in line with, request by Senator Hatfield to cooperate with the State of Oregon as to the resources of the Columbia River system.

On April 2, 1990, the Shoshone-Bannock Indian Tribes of the Fort Hall Reservation in Idaho petitioned NMFS to list sockeye salmon in the Snake River system. On June 9, 1990, we published in our Federal Registry a notice announcing that this petition presented substantial information and warranted a status review. We are now soliciting information and comments on status review from concerned entities throughout the region.

On June 7, NMFS received four petitions from Oregon Trout and copetitioners—Oregon Natural Resources Council, the Northwest Environmental Defense Center, the Oregon and Idaho chapters of the American Fisheries Society, and American Rivers—to list the Snake River spring, summer, and fall chinook salmon and the lower Columbia River coho salmon. A determination whether to conduct a status review on these populations must be made within the 90-day timeframe required by the act, and that date is September 5.

The ESA requires listing decisions to be based solely on best scientific and commercial information concerning biological status populations in question. You will hear about that. During status review, there is no basis for speculation as to the ultimate outcome of the review or the lengthy impact of the decisions it lists. It is strictly a biological process. Consequently, NMFS is avoiding such speculation.

To date, there has been little need to develop basic procedures for evaluating the status of anadromous fish under the ESA. In fact, in the 17 years since the passing of the act until April 2 of this year, we have never officially received an endangered species petition, and we have conducted one endangered species internal review, and that was in 1981.

Therefore, National Marine Fisheries Service is requesting information and currently investigating certain biological questions relating to salmon under the ESA. We have two working papers out for widespread scientific review and comment. The first paper deals with the basic question of how to apply the ESA's species definition to anadromous fish. The second addresses how to determine thresholds leading to threatened or endangered species. Responses are due on August 6, 1990. A third working paper deals with artificial propagation, what Mr. Wyden commented on, of anadromous fish under the ESA. That will be distributed very soon.

In addition to the broad questions addressed by the working papers, site-specific genetic and biological information on the Snake River sockeye is being compiled through a contract with the Idaho Department of Fish and Game. NMFS will continue to col-

lect information from various research and monitoring studies currently underway.

We have been overwhelmed by requests from Columbia River water users for involvement in the process. And to adequately respond to those questions and ensure we obtain all available information, we have developed what I consider an innovative open system designed to provide public access to the record and we have established a process that includes constituent participation.

Scientific information used in the status review will be deposited in our administrative record—I will show you that illustration in a moment—and will be available for public inspection. To help ensure the scientific record is complete, we have established a technical committee comprised of representatives from State fish and wildlife agencies; Federal agencies, such as EPA, U.S. Fish and Wildlife; Indian tribes; public utilities; and other entities. This committee will help gather information and discuss the validity of the data base. These committee meetings are open to the public.

We have also established a biological review team of NMFS scientists and managers to undertake the review. They will seek additional scientific expertise as needed. They will develop preliminary recommendations and supporting documentation and will interreact with the technical committee.

Further, we believe that additional expert opinions and oversight will be valuable. To assist us, we propose appointing a peer review group of academic scientists to help analyze certain data or review certain conclusions for the biological team. These prominent scientists will be from Oregon State University, University of Idaho, and University of Washington.

Within the Northwest region we have appointed an internal coordinating committee to assist in the many logistical tasks that develop during the review process. This body develops and coordinates the review process. The NOAA general counsel for the Northwest region serves on the committee to ensure the legal consistency.

Recommendations relating to the listing developed by the biological review team will be submitted to the regional director for evaluation and forwarding to Washington, DC, for final decision.

If there is a proposed rule to list any petitioned species as threatened or endangered, the ESA calls for one public hearing, if anyone requests it, within 45 days of the proposed rule's publication. Frankly, it is my preference to hold more than one public hearing, depending upon interest at the time. If there is a proposed rule, these hearings will likely occur in late spring of 1991.

Mr. Chairman, as I conclude I would like to add a couple personal comments on the process and geographically illustrate that process for you. Let me say this: Based on the amount of confusion and paranoia brought about by the spotted owl endangered species review and at the urging of all your staffs and other congressional staffs, we have spent the last 1½ months meeting with Columbia River constituencies and other groups.

Our mission was, frankly, to inform them of the act and solicit their comments, especially as it pertained to the process of conducting this biological review. It became abundantly clear to me that there was and, frankly, probably still is, a lack of understanding

and, more importantly, mistrust about processes regarding the scientific review.

The key concerns we heard was not being able to access the process, being denied input or having the ability to provide timely input, and frankly, or finally, the need to access the record.

Based on those very honest concerns, we proposed to the Secretary of Commerce an innovative new process that includes the formation of the technical review committee which includes this constituency; and further include a peer review process of our scientific evaluation, and this will be done by the academic community, scientists from our representative universities.

Mr. Chairman, very quickly I will show you on the chart what we propose.

First for the committee, just a bit of geographic demonstration of what we are talking about. The sockeye salmon come from the Stanley basin deep within the heart of Idaho. There is the Salmon River. There are six lakes involved, and these are from Fish Lake.

The four petitions that we have—three petitions we have looked at Snake River's chinook salmon are in the zone of the mouth of the Snake River up to and including Salmon River over to Ice Harbor Dam.

The interesting petition is the lower river coho. That would include the zone that involves the Bonneville Dam to the mouth of the Pacific coast, and that issue is primarily an issue of looking at wild and native fish.

Mr. Chairman, second, the review as I have mentioned. First, acknowledgement of receipt of petition is within 30 days. Second, and probably the most important step then, is the decision on the adequacy of the petition to warrant review, and that is a 90-day process. We have accepted one; we have four still before us.

Third, if we do say the petitions may warrant review and go forward with status review; then we publish that in the public record within 60 days of public comment.

The Secretary has 1 year to make this decision. At the end of the year the Secretary can indicate the listing is warranted; the listing is not warranted, which is subject to judicial review, any negative finding; or a listing is warranted but not timely because of interceding factors.

If the Secretary decides to go forward, the Secretary then has 1 year to finally publish the recommendation of threatened or endangered. There is also a public comment period here within 60 days and, if requested, public hearing. I can guarantee you I will hold public hearings.

PROCESS

What we propose is formation of a technical committee. This is the entry level. To me this is the most important level, and it is open to the constituency. The only criteria these people have been asked is they have technical background since this is a biological review. We have personally invited representatives from PENA, BPA, ESI, as well as State Fish and Wildlife Agency.

They interreact to scientists on the biological review team. You see the line back and forth. Since both of these have never been

done before, I suggest we have a peer review of scientists to examine the process.

And finally the logistical committee here. That is all shown, quickly, that the most important part is the record. The record is formed from the Fishery Service and from the technical committee. That goes forward and is reviewed by the scientific review group or biological review group, which is the review process and decision.

Mr. Chairman, that concludes my comments. I am prepared for your questions.

Senator HATFIELD. Thank you very much.

[The statement follows:]

STATEMENT OF ROLLAND A. SCHMITTEN

Mr. Chairman and Members of the Committees:

Thank you for inviting me here today to discuss the National Marine Fisheries Service's (NMFS) role in implementing the Endangered Species Act (ESA). I am Rollie Schmitten, Director of the Northwest Region of the National Marine Fisheries Service, National Oceanic and Atmospheric Administration (NOAA), within the Department of Commerce. The NMFS has responsibility for living marine and estuarine resources and anadromous fish.

I propose to address three major issues today: first, the actions that have led to our review of certain stocks of salmon under the Endangered Species Act; second, the legal requirements of the ESA; and third, the actions that NMFS has taken to date to carry out its obligations and the review process we have developed.

NMFS RESPONSIBILITY AND PETITIONS RECEIVED

NMFS is responsible for ESA actions regarding marine fish and certain marine mammals. Since some species of fish, such as anadromous fish, occur both in fresh and marine waters, a Memorandum of Understanding (MOU) between the U.S. Fish and Wildlife Service and NMFS was developed to designate the agency responsible for ESA action on those species. Under the MOU, the NMFS was made responsible for salmon and steelhead.

Within a three-month period, NMFS received five petitions to list certain Columbia River salmon stocks under the Endangered Species Act. First, on April 2, 1990, a petition was received from the Shoshone-Bannock Indian Tribes to list sockeye salmon in the Snake River, Idaho. Then, on June 7, 1990, four petitions were received from Oregon Trout and other co-petitioners to list

Snake River spring, summer, and fall chinook salmon and lower Columbia River coho salmon.

LEGAL ACTIONS REQUIRED UNDER THE ESA

Once NMFS receives a petition to list a species or population, the ESA requires specific actions with regard to the listing process. Briefly, these actions require that NMFS acknowledge receipt of the petition within 30 days of receipt. Within 90 days of receipt, NMFS must announce whether the petition presents substantial scientific or commercial information that a listing may be warranted. If a petition is found to present such information, NMFS must promptly commence a status review of the species concerned. That status review must be based solely upon biological information relating to the species in question. All time references are based upon the date a petition is received by the Secretary of Commerce, or his designee.

If a petition is accepted and a review of the status of the stock is conducted, then within one year of receiving the petition, NMFS must determine whether the petitioned action to list is warranted. If a listing is warranted, NMFS must promulgate a proposed rule to implement the listing action. Within two years of receiving the petition, or within one year of the proposed rule, NMFS must determine whether the species is threatened or endangered and promulgate a final rule.

ACTIONS UNDERTAKEN BY NMFS TO DATE ON PETITIONS

A number of actions involving anadromous fish have occurred recently in the Pacific Northwest. In February, NMFS staff independently began an informal status review of sockeye salmon in the Salmon River, Idaho (a tributary to the Snake River).

On April 2, 1990, the Shoshone-Bannock Indian Tribes petitioned NMFS to list sockeye salmon in the Snake River system of Idaho. On June 9, 1990, we published a notice in the Federal

Register announcing that this petition presented substantial information and warranted a status review. We are now soliciting information and comments on the status review from concerned entities throughout the region.

On June 7, NMFS received four petitions from Oregon Trout and co-petitioners (Oregon Natural Resources Council, Northwest Environmental Defense Center, the Oregon and Idaho Chapters of the American Fisheries Society, and American Rivers) to list Snake River spring, summer, and fall chinook salmon and lower Columbia River coho salmon. A determination whether to conduct a status review on these populations will be made within the 90-day time period required by the Act (September 5, 1990).

The ESA requires listing decisions to be based solely on scientific and commercial information concerning the biological status of the population in question. During the status review, there is no basis for speculation as to the ultimate outcome of the review or the likely impacts of a decision to list. Consequently, NMFS has avoided such speculation.

To date, there has been little need to develop basic procedures for evaluating the status of anadromous fish under the ESA. Therefore, NMFS is requesting information and currently investigating certain basic biological questions relating to salmon under the ESA. We have two working papers out for widespread scientific review and comment. The first one deals with how to apply the ESA's "species" definition to anadromous fish; and the second addresses how to determine thresholds leading to threatened or endangered status. Responses are due by August 6, 1990. A third working paper dealing with artificial propagation of anadromous fish under the ESA will be distributed soon.

In addition to the broad questions addressed by the working papers, site-specific genetic and biological information on Snake

River sockeye is being compiled through a contract with the Idaho Department of Fish and Game. NMFS will continue to collect information from various research and monitoring studies currently underway.

NMFS has been overwhelmed by requests from Columbia River water users for involvement in the process. To respond to these requests and to insure that we obtain all available information, we have developed an open system to provide public access to the record and have established a process that includes their participation.

The scientific information used in the status review will be deposited in our administrative record (Figure 1) and will be available for inspection by the public. To help insure the scientific record is complete, we have established a Technical Committee (Figure 2) comprised of representatives from state fish and wildlife agencies, other Federal agencies, Indian tribes, public utilities and other interested entities. This Committee will help gather information and discuss the validity of the data base. These committee meetings will be open to the public.

We also have established a Biological Review Team of NMFS scientists and managers to undertake the review. They will seek additional scientific expertise as needed. They will develop preliminary recommendations and the supporting documentation.

We believe that additional expert opinions will be valuable. To assist us, we will appoint a "peer" group of academic and other scientists to help analyze certain data or review certain conclusions of the review team.

Within the Northwest Region, we have appointed an Internal Coordinating Committee to assist in the many logistical tasks that develop during the review process. This body develops and coordinates the review process. The NOAA General Counsel for the Northwest Region serves on this Committee to ensure legal

consistency. Recommendations relating to listing developed by the Biological Review Team will be submitted to the Regional Director for evaluation and forwarding to Washington, D.C. for a final decision on listing. If there is a proposed rule to list any petitioned species as threatened or endangered, the ESA calls for one public hearing if anyone requests it within 45 days after the proposed rule's publication. It would be my preference to hold more than one public hearing depending on interest at the time. If there is a proposed rule, these hearings would likely occur in late spring of 1991.

In closing, we thank the host for this opportunity and are optimistic that this hearing will lead to greater understanding of the process which NMFS will follow in proceeding toward an orderly conclusion of this matter.

Senator HATFIELD. Congressman Wyden.

Mr. WYDEN. Thank you very much; Senator. Mr. Schmitten, let me tell you why I think this issue is so important. The evidence indicates there are more hatchery fish now than wild stock, but clearly the wild stocks have a genetic diversity that is so important to us if we need to have breeding resistance to disease or superior size or other desirable characteristics. So these are only some of the reasons why preserving wild stock is so important.

I am going to ask you and every other expert witness who comes out here, right out of the box, ask them first of all, why do you think these precious stocks, these wild stocks that are so important are declining?

Mr. SCHMITTEN. Congressman Wyden, I would say and have observed now for nearly a decade many reasons, and it is not one single factor. You will never hear me say that the power people are at fault or harvesters are at fault or the land users, habitat. I think it is a combination of all those factors. While we do have problems, Congressman Wyden, I would say we also have successes, and we have focuses on these processes. So philosophically, I absolutely agree with you. The answer is there are many facets. No one facet is totally responsible. I think we will come to resolve this.

Mr. WYDEN. Get me a little further than that. First of all, you named a number of groups. You did not mention government at all as having a role. Has government taken steps, in your view, that have produced policies that result in the dwindling of our wild stocks?

Mr. SCHMITTEN. Very definitely yes. For instance—by the way, government has also been wrong, the fish managers. But I think the success, when you look at control now that we have from Alaska all the way to California regarding the high sea management of our fish, where we were suffering losses in Alaska, where

we were suffering losses when our fish stocks came back from Canada, we now, using management process, have a control management.

The Magnuson Act brought us a process to review and ensure that the rightful owners, your constituents on the river, will receive the fish back. Certainly not an absolutely perfect process but it is so much better than what we had before. I think we have come a long ways.

Mr. WYDEN. Here an article from the Oregonian just a few weeks ago saying new studies show wild salmon runs the lowest in years. This is talking about the Columbia right here. Now, that does not give me the kind of optimism you are talking about, and the report does not give us the kind of information we need on the causes for those runs declining. Can you shed any information on why you think runs on the Columbia are the lowest in years?

Mr. SCHMITTEN. Congressman Wyden, what I personally believe is we have focused for many, many years on bringing large quantities for catches. People like to catch fish. We have to have focuses that comes through our natural processes and, quite frankly, that process does not examine as closely as we need to to focus on wild stocks to make sure we are not superseding.

I think that is the purpose and that is what your fish and wildlife agencies, even the other Federal agencies—EPA, Power Council—are looking at. We cannot be content with providing a lot of fish in troubled times; now we have to provide quality fish.

Mr. WYDEN. We are going to have a great many agencies today that have a direct or indirect say in making fish policy for our region. Do you think some of the problem that we are facing has been that through this huge array of agencies that it would have been difficult to coordinate fish management to strengthen the available of these wild stocks?

Mr. SCHMITTEN. Very good question. I not only think that, I believe that. I think you can go back not very many years when fish and wildlife agencies were disjointed, not together; tribes and State agencies were not working together. I think that has been improved too. Where there sits 2 Federal agencies, 4 State agencies, 13 tribal agencies now trying to speak to you and the other managers, that has been a problem. But we have been together now for 2½ years. But these are improvements, and we have come a long ways.

Mr. WYDEN. The Northwest Power Act, which was passed just before my time, was to help us develop coordinative fish restoration policy. Now, I would like your assessment of how the Northwest Power Act has worked in terms of promoting fish restoration. I guess I have got to tell you, my sense is if it is working and doing what Senator Hatfield and the chairman of my committee, John Dingell, had intended, we would not be sitting here staring at all these petitions. Why don't you give me your assessment about whether the Power Act is really bringing about the fish restoration that the delegation had in mind in 1980.

Mr. SCHMITTEN. It is always difficult to assess another person's program. I believe that the Power Act certainly brought equities to the table to both fish and power. Unfortunately, in the process of being started it has been very slow. I think we have credible people

serving on the Power Council. Their intentions are right. We see the continued study of what we need is really concrete evidence of systems. We need fish, and we are past the point of studies. We need physical help and we need physical plans and we need processes, not studies.

Mr. WYDEN. Let me ask one other question. Senator, I know it is going to be a long day, and I appreciate it.

You are in a difficult spot in terms of political questions, and frankly, and I and Senator Hatfield and Congresswoman Unsoeld for some time have been trying to change the priorities in Washington, DC. I would like to see us spend a lot less on Stealth bombers and try to get some of the money here at home to protect our natural resources.

It would be helpful to you, would it not, to have additional funding at this time to try to move more quickly in terms of trying to preserve wild stocks, wouldn't it?

Mr. SCHMITTEN. Congressman Wyden, I will relate this quick note. I have briefed all your staffs. Fortunately, my staff was seated beside me. This is not necessarily an issue that you can throw all the money you want it. There are more improvements than that. Because of the time constraint we have before us, we have submitted—first we personally thought we could handle our existing funds. We did not anticipate five petitions. That we were not prepared for. We have requested three more people and $350,000 for fiscal year 1992 to handle this. The gap we have is seen for 1991.

Mr. WYDEN. But you are going to need more funding then to handle those additional petitions, right?

Mr. SCHMITTEN. Yes.

Mr. WYDEN. I appreciate that.

Senator, if we could get that for the record, and we will be working for you. If you could furnish us for the record the additional information to outline what those extra costs would be for the five petitions that you plan on rather than the one, I would find that very helpful. I know from you that there is no way that our natural resources agency can handle all these petitions for endangered species with these resources. There is no way you can do it.

I want to be clear as well that I am not favoring throwing money at the problem. What we are talking about is selective investments, select quality investments, and certainly making sure you all have the resources to deal with petitions. And I appreciate you saying you have resources to deal with one but you have problems with five. Because I think that is clearly what our information indicates.

I thank you, Senator.

Senator HATFIELD. Congressman Wyden, thank you. I want to follow up. I would urge you not to wait until October 1, 1990, the new fiscal year, to ask for these additional funds necessary to expedite this whole process, because we can reprogram in fiscal year 1990 if you will indicate the need to us at the very earliest opportunity. Following up again on Congressman Wyden's very strong points, let us move this quickly and request the resources necessary. If we have to go to the Secretary for reprogramming, we will do that for fiscal year 1990 rather than waiting for 1991.

Congresswoman Unsoeld.

Ms. UNSOELD. I will want to commend you, Rolland, for an excellent approach to this issue. And if the public and news media will take advantage and play a constructive role also, it will allow all the citizens in the Northwest who will be so heavily affected, regardless of what the ultimate decision is, to keep informed and not feel broadsided at some point. I really commend you. You have talked about quantity versus quality, and I think you are alluding to natural stocks versus hatchery fish. Is there a genetic or biological difference?

Mr. SCHMITTEN. Congresswoman Unsoeld, that is the very first study. It will take the next study to determine that. That is the key question. You hit the very first thing we have to look at.

Ms. UNSOELD. Now, in some other part of the Nation, I do not remember where it is, there is an effort to protect a species that I have been thinking we need a bounty for, and that is the squaw fish because of their fondness for the small salmon steelhead. Is there a potential for us to be trying to eliminate the squaw fish and the damage we do to deplete these stocks and then have to beef up that population?

Mr. SCHMITTEN. It is interesting. One of the five factors the Secretary will make his decision on is predators. Certainly that is a problem we face; in fact, so much so I think it is the Power Council that is offering a bounty on the squaw fish.

Ms. UNSOELD. I think it should.

Mr. SCHMITTEN. The bounty system on the squaw fish, that is a matter we must attend to, and I sense it started maybe—we are going to lick that.

Ms. UNSOELD. Well, I wish you well, and I appreciate your testimony.

Mr. SCHMITTEN. Thank you.

Senator HATFIELD. If other questions come to mind, we will bring them up at the time.

Mr. Schmitten, when I requested the status report which you provided, I then asked the question: Did the agency know about this alarming statistic before June 1 in the normal process? And then, of course, the other way to phrase the question is, Why did it take so long to determine this particular status? Why did it take so long?

Mr. SCHMITTEN. Mr. Chairman, I think the real catalyst that focused all our attentions on our depleting stocks is most likely the American Fisheries Society meeting being held here in Oregon last year, February of this year. Out of that meeting, came a report from their endangered species committee. That committee indicated there were four—or three different categories, one know as present and declining, of which they identified 42 stocks; and then there was a present and stable category; and a category, needing more information.

That was really the first look at trouble spots throughout the system. We seized on that, and we actually started a proactive investigation of our own, and we started that in February of this year to look at the various stock of the first petition we had before us.

So those are acknowledging the events the fish started. We have looked at trouble spots back in 1981, and we have been so busy

trying to manage the high seas, the outer coast from Alaska to California, that again we are now focusing inward.

Senator HATFIELD. Mr. Schmitten, I refer now to a document of the status report dated June 1. In that document there was a graph, particularly No. 9. Do you have a copy of that?

Mr. SCHMITTEN. I believe so; yes, we do.

Senator HATFIELD. Please bear with me. As a layman, perhaps I do not see what is obvious to you as a professional. This graph is a count for sockeye salmon and fish near the Salmon subbasin and the Ice Harbor Dam. I see this as a graph representing the run of those fish over the period of time from 1934 to 1990. And more specifically, it focuses on 1962 to 1989.

Now, it appears to be that beginning at 1977 there was a sharp decline, and then it dropped to the so-called bottom at about 1978, 1979. It remains at the bottom of that graph at the zero line in 1980; 1981 it rises a little; 1982, 1983, 1984—it drops back again in 1984 and back down to zero, I believe, in 1985; and then it drops below zero at about 1989.

Now, did this information come as a result of the status report, or was this data not perhaps compiled in this form? I am still trying to understand why we did not have any kind of notice or signal. "We" meaning the public or interest groups or myself or my colleagues who are in places of position where we could effectuate some kind of countermeasure.

Mr. SCHMITTEN. Mr. Chairman, several things were heard from day one. At that time the stock concern was the fall chinook. Two—really three things happened. One the Power Act was passed; second, the Snake River compensation plan came to be; and third, we reached agreements of finance on most facilities and started implementing those.

Frankly, the stocks we were monitoring then in the early 1980's have turned around. The fall chinook is now one of our success stories. We have concentrated our efforts on the wild stocks. Here is one right here, the Snake River sockeye. That has never been a big stock that has had any great commercial interest in the history that we have had, going back to the teens. But here now comes a stock that we need, and our focus is now on that.

Senator HATFIELD. Do you have a problem of staffing in terms of having adequate staff to monitor all the species? You said you had your focus on other species and that you were not focused on these other minor species—I may be using the wrong nomenclature. I am still not sure why we did not have a signal on the sockeye salmon before June 1, 1990.

Mr. SCHMITTEN. Mr. Chairman, again, there is around 300 populations we are dealing with, and when you are dealing with that large a number, usually what ultimately is focused on the bread-and-butter stock, certainly fall chinook. State, tribal says you must provide protection.

Do I have adequate staff? I have good staff; I have adequate staff. But if we were to handle every subspecies in the Columbia system, we do not have adequate staff.

Senator HATFIELD. But this one species, if determined by the petitions and other actions, could become part of the Endangered Spe-

cies Act. If only this one species was processed and listed as endangered, you would have to have a recovery program for just this one.

Mr. SCHMITTEN. That is correct.

Senator HATFIELD. To go back to Congressman Wyden's comments, did I understand you to say that you needed three more people and $350,000 for handling the 1992 budget?

Mr. SCHMITTEN. Yes; Senator Hatfield. We have applied for funds; it is in the 1992 budgets: three individuals and $350,000. Superseding this, though, the system's administrator said, "I will provide needed funds to conduct the studies on the Columbia." I can only presume that he will shuffle from his existing budgets——

Senator HATFIELD. Are you saying you will not need these additional people to handle this or do you have current personnel to handle this? There is no delay in the process?

Mr. SCHMITTEN. There is certainly no delay in the process.

Senator HATFIELD. But you need the three more staff people.

Mr. SCHMITTEN. Yes.

Senator HATFIELD. You need them now.

Mr. SCHMITTEN. Yes.

Senator HATFIELD. Not in 1992.

Mr. SCHMITTEN. Right.

Mr. WYDEN. Senator, could I ask a question regarding what you are asking about?

Senator HATFIELD. Sure.

Mr. WYDEN. You are asking a key problem, of course, in the Appropriations Committee; you all have to deal with this. These extra three people, Mr. Schmitten, you are talking about and the $350,000, that was before the petitions for the endangered species came to you. So it is going to take additional funding and resources to deal with those; is that correct?

Mr. SCHMITTEN. I will turn this over to Mr. Tuttle.

Mr. TUTTLE. Thank you. We received the petitions after we had asked for the $350,000 and the three individuals.

Mr. WYDEN. So what will it take? Mr. Schmitten said he did not have the resources to deal with the extra petitions. What will it take to deal with these extra petitions that have come forward?

Mr. TUTTLE. We had anticipated these petitions when we come with the request, and the three positions—we received word quite a bit ahead of time that the petitions were on the way. So it is included.

Mr. WYDEN. So it will not take anything else?

Mr. TUTTLE. That is the way we are looking at it right now.

Mr. SCHMITTEN. Congressman Wyden, though, I think the key point you have made is timely. We need it now.

Senator HATFIELD. Well, 75 percent of that process will be completed by 1992.

Mr. WYDEN. Thank you very much.

Senator HATFIELD. Now, Mr. Schmitten, let me ask you this. In this biological review team you have indicated in your process chart, is that information proprietary or would it be available for our regional group that we have asked to convene here to do some predecisional evaluation? Would that be available to them or will you hold that as proprietary information until 1992?

Mr. SCHMITTEN. It is available in form of the studies we have. In fact, we are taking these down to the committee to share it with them. I guess my signal is I am confident that we have great scientists. Those working in the field are smart people. We have quality people with that information. So we will share that back and forth. The only thing that would be proprietary is the final data in preparation for the Senate hearing.

Senator HATFIELD. But basic raw material, raw data base would be available to our predecisional——

Mr. TUTTLE. That is correct.

Mr. SCHMITTEN. Even to the public, Senator.

Senator HATFIELD. On the process, again, you talk about peer review made up, perhaps, of scientists from University of Washington, Oregon State University, and University of Idaho. I want to commend you on this procedure because I think that we have seen what has happened to the Jack Ward Thomas spotted owl report. I personally believe that there are those who might challenge it. But I think you minimize that once your process moves to a scientific data base and allow input by other scientists and a peer review.

What kind of authority do they have? If they see a flaw in the scientific data, do they have not only a responsibility to call that to the attention of your group, or do they have authority in addition to calling it to your attention? Is there any authority like that?

Mr. SCHMITTEN. No.

Senator HATFIELD. What is their role?

Mr. SCHMITTEN. Their role is to review the work, scientist to scientist, pieces—for instance, we are looking for geneticists from the universities because I want them to review key data. But at no point would they recommend a listing or not list. That is a function of the Secretary of the agency.

It was interesting to me when I proposed this to our scientists, thinking they may say they wanted no one looking over their shoulders, they said, "No, we welcome that. That's a process we're accustomed to."

The only other one that the Secretary of Commerce has not referred to yet that Senator Hatfield said is a proprietary nature, issues of confidentiality. But I am able to say that the Undersecretary has already said he likes the design of this.

Senator HATFIELD. Mr. Schmitten, you indicated in your testimony that the American Fishery Society along with the Oregon Trout identified them as copetitioners. Are any of your agency's scientists on your biological review team members of the American Fisheries Society?

Mr. TUTTLE. They possibly are; I am not sure. I have not really checked.

Senator HATFIELD. Would you see that as a vulnerability, a charge of conflict of interest?

Mr. SCHMITTEN. Mr. Chairman, I do not know. I would not see that—I see that as a professional organization, and I see that as having pride as part of that organization.

Senator HATFIELD. I would check with your lawyers.

Mr. SCHMITTEN. I will do that.

Senator HATFIELD. I would think you would want to protect this biological team of yours from any secondary or tertiary charges. I

am not a lawyer. I think if people are evaluating even scientific data as members of a society that is a petitioner to that office, I would not want to see anything that could become an issue after the fact.

Mr. SCHMITTEN. That is a very good point, and we will issue a disclaimer.

Senator HATFIELD. Mr. Schmitten, I have seen the public data base, and you have indicated in some of your own materials that only two sockeye passed Lower Granite Dam last year. We do not know what sex those two fish were. Can we not say for all intents and purposes that the Snake River sockeye salmon is now extinct?

Mr. SCHMITTEN. Mr. Chairman that is a very good question because there has been a lot of confusion at this point. It is common knowledge that only two fish did pass through Lower Granite last year, and no one knows whether they were males, females, or one of each. Therefore, many people are coming to the conclusion that they are extinct.

You have to go back to the biology of that species. We had called them 2-year salt fish, which means they spent 2 years in salt water before they come back and spawn. So the answer is, do we have another H class out there in the ocean yet to come? And only this year we found we did not have any sockeye returning or two or less could we then speculate they are extinct.

I refer back, I believe it was, 3 years ago there were zero fish reported passing. So these fish, as you have indicated, on the graph are down at the bottom, we do not believe are extinct or will not officially know till this year.

Senator HATFIELD. One last question. Mr. Schmitten, I wonder, do wild stock salmon interbreed with hatchery salmon?

Mr. TUTTLE. Yes; they do. On the spawning grounds can interbreed. If you "out" from a hatchery, given a stream someplace, pass a wild stock, it is possible that when the hatchery fish come back they will interbreed with the wild stock.

Senator HATFIELD. One last request. Will you submit for the record your professional judgment on the role of drift net fishing on these runs? I happen to be sponsoring a bill that outlaws drift net fishing entirely, internationally, and I would like to see what your agency feels.

Mr. SCHMITTEN. Senator Hatfield, we will do that.

Senator HATFIELD. Thank you very much.

Now I would like to invite Mr. David Yaden, State of Oregon; Mr. Dan Silver, State of Washington; and Mr. Andrew Brunelle, State of Idaho, representing the most distinguished Governors of the United States.

I am very happy to have you here representing Cecil Andrus, former Secretary of the Interior, of Idaho; and Booth Gardener, State of Washington, very distinguished Governor of Washington; and one of the great Governors of the State of Oregon, Neil Goldschmidt.

STATEMENT OF DAVID YADEN, DIRECTOR, OREGON DEPARTMENT OF ENERGY, REPRESENTING NEIL GOLDSCHMIDT, GOVERNOR OF OREGON

ACCOMPANIED BY RANDY FISHER, DIRECTOR, OREGON DEPARTMENT OF ENERGY

Mr. YADEN. Thank you, Senator Hatfield, Representative Wyden, Representative Unsoeld. I am Dave Yaden, director of the Oregon Department of Energy. With me is Randy Fisher, director of Oregon Department of Fish and Wildlife. I will be reading a statement from Governor Goldschmidt. I cannot speak as fast as the Governor; I will be reading part of his statement.

The State of Oregon and the Northwest region are grateful to you for this important hearing, and Senator Hatfield, we especially applaud the fact that you are pointing the way toward at least the start of a sensible regional response to the proposed listings under the Endangered Species Act.

My remarks will focus primarily on how the region ought to approach the process through which the listing decision is made and recovery plans developed. We have learned from our experience with the spotted owl that managing that process correctly is difficult but essential if we are both to save the fish and maintain a measure of regional control over the Columbia River. When it comes to that process I believe there are two dangers. The first is to think that there is an easy or cheap way out, or that the act does not really mean what it says about the priority given to protection of species. It does. That is not a value judgment; just a recognition of what the law is.

The second danger is the opposite of the first; that is to believe that there is nothing that can be done. There is no easy way out, but there is something that can be done. It is important that we try.

This is the Columbia River that we are talking about. And yes, it is the salmon we are talking about. Let there be no doubt: I stand for preserving the salmon; I stand for increasing the fish runs; and I stand for doing so as intelligently as possible. In this case, that requires a degree of regional cooperation almost unprecedented. We will just have to rise above the narrowness of either the act or our own self-interest in order to save the salmon and salvage control of the river.

This is not the time to forecast the consequences and costs should the Marine Fisheries Service list one or more of the runs. Costs and consequences would depend upon the recovery plan developed. But they could be very substantial.

The largest cost might be placing almost all activities affecting the river under the purview of the National Marine Fisheries Service and Federal judges. As I understand the act, should the Marine Fisheries Service list one or more of the stocks as either threatened or endangered, then any Federal action which might affect the fish would be subject to review by NMFS and possibly by a Federal judge.

How far the act might reach to affect State and local and private actions is little fuzzy, but the safest bet is that no one will be unaffected if their actions harm the fish or affect its chance of recovery.

Should there be a listing, it is safe to say that all of the major activities—the harvest of fish in the river and the ocean, the production of power, navigation, irrigation, recreation, flood control—all activities authorized, funded, or carried out by the Federal Government will be affected. The effect of a listing might reach management of timber and grazing on public lands. It could touch efforts to set water quality standards and reach accord on dioxin levels. It is troubling that a listing might even reach Indian treaty rights and tribal management of the fishery.

Anyone who has interest in or a claim upon the river might be caught up in a recovery plan. It is not enough for anyone to say, "I'm not part of the problem." Anyone who uses or affects the river might be made part of the solution regardless of whether they believe themselves to be part of the problem.

Much is at stake for the entire region. If it is possible to preserve the fish without an actual listing, this would preserve more control by the regional management of the river and fishery than would a listing.

This is not to suggest there is a cheap route or a way around the act. Rather, if scientific review of the stocks persuades NMFS that a listing is warranted, it is still possible to avoid the listing if there is in place an enforceable management program which will accomplish the same ends intended by a listing. Such a program would need to be in place before the end of the 24-month period NMFS has to reach a final decision.

Senator, I believe this is very much in line with the predecisional management plan which you have proposed this morning.

I will proceed.

I propose, then, the following steps. First, NMFS must accomplish its biological review of the status of the stocks and the need for listing both quickly and cleanly. We encourage NMFS to, No. 1, conduct an open scientific review with ample opportunity for comment by interested parties; No. 2, complete the review as quickly as possible; and No. 3, maintain scientific credibility of the process so as to a preserve management options.

I would stress two points next. First of all, there is considerable experience and knowledge accumulated throughout fish management agencies, the tribes, the Power Planning Council, BPA, and other entities. The status review process must allow opportunity for the fish biologists of these and other interested parties to have their say. This will add to the credibility without polluting the scientific basis of the review.

Second, NMFS must work to keep the status review focused on the science of the fish survival rather than on how to manage the river. The goal should be to preserve management options rather than foreclose them.

Second, as requested by Senator Hatfield this morning, outside of the listing process, we should convene a group of interested parties to consider a management plan if NMFS does issue a proposed listing. This group would need to include representatives of the major river interests, yet be small enough to be manageable. It would need to be sufficiently high level to make very large decisions about use and management of the river quickly. If there is to be a proposed listing and if this group concludes an enforceable agree-

ment on how to preserve the stocks, National Marine Fisheries Service could then decide if the management plan is sufficient to avoid a listing. But the plan would need to be realistic, scientifically sound, and enforceable.

This obviously is a tall order to follow, and there is no guarantee it would work. But it is in everyone's self-interest to at least come to the table. And this must be the ground rule: nothing will be on the table to begin with, but all who participate must agree that nothing is initially out of bounds. Parties cannot set preconditions which will undermine the purpose of convening in the first place.

Even if it turns out to be impossible to reach agreement in time to avoid a listing, that is in the event Marine Fisheries Service does propose one, such a group surely would improve the region's ability to devise a postlisting recovery plan.

The salmon issue is not the only thing going around the Columbia River right now. We have had discussions with other States about reinvigorating the Columbia River Compact. Los Angeles has again cast its covetous eye upon our river. The State of Idaho is engaged in a large and complex adjudication of water rights. The Bonneville Power Administration and its Federal compatriots have begun meritorious review involving all efforts or all interests in a comprehensive review of the operations.

And I applaud this effort. But all these actions and other issues could become little more than footnotes to the decision about listing the salmon.

Because of the way in which the Endangered Species Act operates, I have concentrated on responding to the petitions for listings. But at this point, let me also recognize that much has been done over the past decade to improve the Columbia River fish runs. Credit especially goes to the Northwest Power Planning Council for the progress that has been made.

And it is no surprise that the region is again indebted to Senator Hatfield, Representatives Wyden, AuCoin, and Unsoeld for making sure that Congress has appropriated funds to help restore fish runs. With the listing process now underway, we need your help more than ever.

The Endangered Species Act is a Federal law. The entities that run the river—BPA, Corps of Engineers, River Reclamation—are Federal. And many of the actions needed to help the fish are Federal actions. It is essential that the Federal agencies work with the States and other interests as partners in a regionally cooperative effort to save the fish and save our ability to manage the river.

We do need to rise above narrow viewpoints, narrow statutory mandates, narrow claims upon use of the river and respond as true stewards of both the fish and the water.

I have sent letter to Governors Andrus, Gardner, and Stephens proposing the procedure I have outlined. I am hopeful, even optimistic, that the States and the whole region will be able to respond quickly in the direction Senator Hatfield has pointed. Thank you.

[The statement follows:]

STATEMENT OF GOV. NEIL GOLDSCHMIDT

The State of Oregon and the Northwest region are grateful to you, Senator Hatfield and Congressman Wyden, for holding this informational hearing on an issue that is critically important to the Northwest.

My remarks will focus primarily on how the region ought to approach the process through which the listing decision is made and recovery plans developed. We have learned from our experience with the spotted owl that managing that process correctly is difficult but essential if we are to both save the fish and retain a measure of regional control over the Columbia River.

We still have time to get the salmon listing issue resolved in the best possible way we can -- given the strictures of the Endangered Species Act. We have time because we are early in the process. But we do not have time to waste.

I believe there are two procedural dangers. The first is to think that there is an easy or cheap way out, or that the Act does not really mean what it says about the priority given to protection of species. Well, it does. That is not a value-judgment, just a recognition of what the law is.

The second danger is the opposite of the first, that is, to believe that there is nothing that can be done. That we have to just sit by and watch the listing process take place.

There is no easy way out. But there is something that can be done.

It is important that we do try. This is the Columbia River we are talking about. Supplier of energy and fish. Sustainer of agriculture. Source of recreation and water for commerce and living.

Yes, it is also the salmon we are talking about. Let there be no doubt: I stand for preserving the salmon. I stand for increasing the fish runs.

And I stand for doing so as intelligently as possible. In this case that requires a degree of regional cooperation almost unprecedented. So we will just have to rise above the narrowness of either the Act or our own self-interest in order to save the salmon and salvage control of the river.

This is not the time nor am I competent to forecast the consequences and costs should the National Marine Fisheries Service list one or more of the runs. Costs and consequences would depend upon the recovery plan developed. Most likely, they would be substantial.

The largest "cost" might be placing almost all activities affecting the river under the purview of the National Marine Fisheries Service and Federal judges. As I understand the Act, should NMFS list one of more the stocks as either threatened or endangered, then any Federal action which might affect the fish would be subject to review by NMFS, and possibly by a Federal judge. Even under the best of circumstances and under the most benevolent and competent of people in NMFS, this is not a pleasing prospect.

How far the Act might reach to affect state and local and private actions is a little fuzzy, but the safest bet is that no one will be unaffected if their actions harm the fish or affect its chance of recovery.

Should there be a listing, it is safe to say that all of the major activities -- the harvest of fish in the river and the ocean, the production of power, navigation, irrigation, recreation, flood control -- all activities authorized, funded or carried out by the Federal Government, will be affected. The effect of a listing might reach management of timber and grazing on public lands. It could touch efforts to set water quality standards and reach accord on dioxin levels.

Significantly, a listing might even reach Indian treaty rights and tribal management of the fishery.

None of these potential effects can be absolutely forecast. But little can be ruled out as at least possible. Anyone who has an interest in or a claim upon the river might be caught up in a recovery plan. It is not enough for anyone to say "I'm not part of the problem." Anyone who uses the river might be made part of the solution regardless of whether they believe themselves to be part of the problem.

The National Marine Fisheries Service, Northwest Regional Office, has begun review of petitions for listing for five Columbia-Snake River runs. The procedures and substantive standards of the Endangered Species Act are very stringent. But much is at stake for the entire region. If it is possible to preserve the fish without an actual listing, this would preserve more control by the region over management of the river and fishery than would a listing.

This is not to suggest that there is a "cheap" route or a way around the Act. Rather, if scientific review of the stocks persuades NMFS that a listing is warranted, it is still possible to avoid the listing IF there is in place an enforceable management program which will accomplish the same ends intended by a listing. Such a program would need to be in place before the end of the 24-month period NMFS has to reach a final decision.

In order to preserve as many options as possible for the region, I propose, in rough outline, the following steps:

* NMFS must accomplish its scientific review of the status of the stocks and the need for listing both quickly and cleanly. This, by law, must be done without consideration of economic impacts. While NMFS has up to 12 months for this step, it can act sooner. Therefore, we should encourage NMFS to 1) conduct an open scientific review with ample opportunity for comment by interested parties; 2) complete the scientific review as quickly as possible; and 3) maintain the scientific credibility of the process so as to preserve management options.

To NMFS I would stress two points. First, there is considerable experience and knowledge accumulated throughout fish management agencies, the tribes, the Power Planning Council, BPA and other entities. The status review process must allow opportunity for the fish biologists of these and other interested parties to have their say. That will add to the credibility of the process without polluting the scientific basis of the review. Secondly, NMFS must work to keep the status review focused on the science of fish survival rather than on how to manage the river. The goal should be to preserve management options rather than foreclose them.

* Outside of the listing process, we should convene a group of interested parties to consider a management plan if NMFS does issue a proposed listing. This group would need to include representatives of the major river interests yet be small enough to be manageable. It would need to be sufficiently high-level to make very large decisions about use and management of the river quickly. If there is a proposed listing and if this group concludes an enforceable agreement on how to preserve the stocks, NMFS could then decide if the management plan is sufficient to avoid a listing. It would need to be realistic, scientifically sound, and enforceable.

This is, obviously, a tall order. And there is no guarantee it would work. But it seems worth a try for this simple reason: while no single interest in the region may believe itself to be responsible for the situation with the Columbia River stocks, no interest can be sure that it will escape the requirements that might be imposed by NMFS or the courts if there is a final listing.

It is in everyone's interest to at least come to the table. And this is the ground rule: nothing will be on the table to begin with, but all who participate must agree that nothing is initially "out of bounds." Parties cannot set pre-conditions which will undermine the purpose of convening in the first place.

There are several avenues to convening this group if it seems a correct course. Regardless of how it gets started, the main point is finding out whether interested parties are willing to give it a try.

Even if it turns out to be impossible to reach agreement in time to avoid a listing (in the event NMFS does propose one), such a group surely would improve the region's ability to devise a post-listing recovery plan.

The salmon issue is not the only thing going on around the Columbia River right now. We have had discussions with other states about reinvigorating the Columbia River Compact. Los Angeles has again cast its covetous eyes upon our river. The state of Idaho is engaged in a large and complex adjudication of water rights. The Bonneville Power Administration and its Federal compatriots have begun meritorious efforts to involve all interests in a comprehensive review of operation of the river. I applaud this effort to find the right balance of all claims for use of the river. But all these other issues and actions could become little more than footnotes to the decision about listing the salmon.

Because of the way in which the Endangered Species Act operates I have concentrated on responding to the petitions for listings. At this point, let me recognize that much has been done over the past decade to improve the Columbia River fish runs. Credit especially goes to the Northwest Power Planning Council for the progress that has been made.

It is no surprise that the region is again indebted to Senator Hatfield for making sure that Congress has appropriated funds to help restore fish runs. Rep. AuCoin has effectively used his position on the House Appropriations Committee, and Rep. Wyden is strategically positioned on the Energy and Environment Committee.

And we need that help.

The Endangered Species Act is Federal law. The entities that run the river -- BPA, Corps, Bureau of Reclamation -- are Federal. And many of the actions needed to help the fish are Federal actions. Many of those actions have already been identified in the plans of the Northwest Power Planning Council. I am in no position to say whether those existing plans or the recent flow proposal of the Columbia Basin Fish and Wildlife Authority will be either necessary or sufficient under the terms of the Endangered Species Act. But I am very much in position to say that foot-dragging by the Corps on construction of by-pass facilities is a dangerous gambit. The filing of the petitions with NMFS should also make clear that it is penny-wise and pound-foolish.

It is essential that Federal agencies help us save the fish.

This week I have sent letters to Governors Gardner, Andrus and Stephens proposing the procedure I have just outlined. If they and you find it has merit, then we should together move quickly. This hearing is a good start.

Senator HATFIELD. Is there a lottery to determine who goes next?

STATEMENT OF DAN SILVER, AIDE TO GOVERNOR, REPRESENTING HON. BOOTH GARDNER, GOVERNOR OF WASHINGTON

Mr. SILVER. Good morning, Mr. Chairman. My name is Dan Silver. I am an aide to Governor Gardner. I would like to express our very deep appreciation for taking the initiative on this issue and getting us moving very early on.

I would like to say, Congresswoman Unsoeld, how delighted we are to have you here today. With your tireless work on the spotted owl issue in recent years, we hope you will be able to sort through this other endangered species through the next few years, and we are well aware of your leadership on the foreign drift net ban. I am very pleased to see you this morning.

Governor Gardner sent down a letter to you this morning. I will just briefly enumerate its points, which are these. The Governor pledges to you his full cooperation in working on this issue. This issue has enormous impact on the Northwest, and we are very well aware of it in Washington State.

We have, of course, pledged our cooperation with the National Fisheries. We will assist them in biological assessment, and we will do our best to keep that assessment uncluttered by other considerations, which is a lesson we have learned in another Endangered Species Act affecting the Northwest. We have already begun our conversations between states.

I think, Senator Hatfield, it is your initiative that got folks from Oregon Fish and Wildlife that we need for our State fish people to help with biological assessment.

The Governor, some weeks ago, set up a task force on this issue alone. This is how important he saw it. He called together a number of agencies who touched on this in one way or another ranging from agricultural, ecology, fishery, wildlife, energy, trade and economic development, utilities and transportation, Power Planing Council representatives, and he has instructed these folks to assist in every way they are able with biological assessment and then attend to initiatives, such as what we have heard this morning from you, Senator Hatfield, for the predecisional process. We have already mentioned that.

And we are eternally grateful for what is the appropriate mechanism; appropriate solutions are in the early going to set up this external process to the wildlife assessment so we are prepared and we are bringing forward the powers of the Northwest Governors to bear on this problem.

So he has also instructed his aides directly, be very careful in comments. We are careful people are not speaking in rhetoric out of hand. As the agency indicated, none of this is based on economic consequences just yet, because we do not know exactly what is going to be proposed.

So while we are cautious about our public comments, I assure you we are deeply committed to putting full resources in cooperation with you, Senator Hatfield, Congressman Wyden, Congresswoman Unsoeld. Thank you very much.

Senator HATFIELD. Thank you very much.

[The statement follows:]

STATEMENT OF GOV. BOOTH GARDNER

I appreciate the opportunity to offer my testimony on recent developments on endangered species petitions for Columbia and Snake River salmon. The issues raised by these petitions are enormous. I am pleased that you have taken the initiative in raising the level of public understanding. We look forward to working with you as we seek to better understand the full dimensions of these issues and the consequences of our actions.

I think it is important to emphasize that the Northwest governments have an historic, and ongoing interest in restoration and enhancements of anadromous fish runs in the Columbia River system. We pledge not only to work with you on the specific issues before us today, but to continue this effort over the long run.

The future of this region's salmon stocks is critical to the well-being of the Pacific Northwest. I pledge the full cooperation of my administration to help the National Marine Fisheries Services. It is imperative that the biological assessment be as scientifically sound as we can make it. We will be providing data and commentary to NMFS in early August, and periodically thereafter as needed.

We have already begun conversations among the states. Our conversations with the Oregon Department of Fish and Wildlife have focused on how we can bring the best scientific expertise in the states to bear on genetic diversity. We have identified the initial level of federal funding over the next two years to help support this scientific work. We hope you will be able to secure this money.

Given the magnitude of this issue, and its many dimensions, I have established a cabinet level task force to guide the state's response. Included in this task force are the Departments of Agriculture, Ecology, Fisheries, Trade and Economic Development, and Wildlife, the Energy Office, the Utilities and Transportation Commission, and my appointees to the Northwest Power Planning Council. This task force is responsible for contributing to the biological assessment involved in listing, reaching out to the many constituencies affected by the listing process, increasing our understanding of the issues, and developing analysis and strategies.

As we work our way through these issues, we can expect hot emotions and high anxieties. It is in times like this that we must maintain our composure. This is the time for an ordered process that can ensure a reasoned response on the part of decision makers throughout the Northwest. I have asked my agency directors to keep

their rhetoric in check, and their minds open as we search for the best means to resolve the issues raised by the listing petitions.

We intend to be an active partner in the resolution of the issues raised in the listing petitions. We pledge a cooperative working relationship with the Northwest states and tribal governments. Please let me know how I can work together with you as well.

STATEMENT OF ANDREW BRUNELLE, SPECIAL ASSISTANT, REPRESENTING HON. CECIL D. ANDRUS, GOVERNOR OF IDAHO

Senator HATFIELD. We will hear now from Mr. Brunelle.

Mr. BRUNELLE. Good morning, Senator Hatfield, Congressman Wyden, Congresswoman Unsoeld. My name is Andy Brunelle. I am special assistant to Governor Cecil Andrus from Idaho. I am here this morning to represent the State of Idaho's views on the potential listing of the Columbia and Snake River salmon as threatened and endangered species.

Four of five petitions brought to light so far involve fish that are born in Idaho; after their long journey, they return to Idaho to spawn and die. Too few are returning to spawn and to die. I will summarize the full statement submitted by Governor Andrus.

Idaho-origin anadromous fish are important to Idaho and the region. The Snake River above Lewiston historically produces an estimated 55 percent of the summer steelhead trout, 40 percent of the spring chinook, and 45 percent of the summer chinook.

Idaho has displayed a long and consistent concern for our anadromous fish. Our fish and game commission has not allowed a general sport-fishing salmon season since 1977. We require catch-and-release sport fishing for the wild steelhead. We have gone to court for the anadromous fish.

Some 15 years ago, Idaho sought an equal voice for the downriver States. More recently we sued Bonneville Power over the proposed intertie expansion. Eventually we got the spill agreement as a settlement. Currently, we are seeking relief for wild B-run steelhead before the U.S. Ninth Circuit Court of Appeals.

Notwithstanding the efforts of the State of Idaho and many interests here today, like Power Council and tribes and many others of various interests, several important anadromous species are either extinct or close to it.

Idaho believes the loss of its resources primarily attributable to one thing: construction and operation of huge dams on Columbia and lower Snake Rivers. The mortality during spring out migration on the lower Snake and Columbia Rivers are unacceptably high. As much as 95 percent of viable fish that leave Lewiston are dead and do not show up in Astoria except as bypass. Overharvest is also a problem and will remain so as long as are the runs are depressed.

Idaho is making an effort to improve the outmigration problem. We are negotiating with Bonneville to do a study of the feasibility and effects of renting water from Idaho water banks. Under a pilot project, we will study how these flows relate to the survival of migrating fish.

The water rental pilot project is only a partial and short-term measure. Idaho's willingness to commit our storage water for enhanced flows does not imply that we accept this alternative as the total solution to the slackwater problem caused by the mainstem dams. Idaho believes the mainstem dams must change operation

criteria to create better passage conditions rather than placing the burden solely on the upstream river and reservoirs that, I might add, are not responsible to migration problem.

Downstream States must commit to supplying water for flows as well as commit to control of harvests in ocean and Columbia River fisheries. This would allow adult salmon, and especially wild fish, to pass through to Snake River spawning grounds.

Idaho shares concerns about the potential effects listing may have upon Federal agencies. Listing could bring unimaginable upheaval to the current Federal activities in the basin. Land use, water uses, and harvest could all come under the purview of the National Marine Fisheries Service.

Section 7, the need of consultation of Federal agencies, could create gridlock of the first order. Costs to the region can be considerable as well.

Idaho fully agrees with the State of Oregon and Governor Goldschmidt's testimony today to encourage National Marine Fisheries to conduct open scientific review with ample opportunity for comment by interested parties. I will also agree more can be done than just sitting back and waiting for the biological assessment. We need to act now and examine ways to rebuild the runs before a possible listing. Congress could play a role here by specifically authorizing budgeting for some or all of the studies to pass that we in the State of Idaho have identified and suggested today as possibility remedies.

Senator, I believe this sits very well with the proposal encouraging the States and interested parties to prepare a list by October 1 of potential options to be incorporated in the predecisional management.

Idaho already has some options. Often, however, without congressional directions, suggestions that we may have to Federal agencies to take a different look at their operations tend to fall on deaf ears. Here are three tasks, just for example, that I feel should be examined.

No. 1, we should explore ways to modify the Snake River basin reservoir flood control rule curves, and shift flood control responsibility to the Columbia River projects. This shift will allow space now evacuated for flood control in February from the Willamette Reservoir, and which happens at the wrong time of year for fish, to instead store the water in the reservoir for later enhancement in stream flows for the April-to-June migration.

No. 2, we should look at implementing operation changes at mainstem dams to mitigate their effects on fish passage. Utilization of the considerable forebay storage in these reservoirs for flushing of downstream migrating juvenile fish. Higher velocities would improve flows for fish, thereby reducing the need for greater volumes of water.

No. 3, we should study the opportunities for providing additional water flows from new storage reservoirs to be constructed specifically for that purpose somewhere in that basin. For many years the State of Idaho struggled internally and within the region on this proposal of the Galloway Dam which would be constructed on the basin. There are possibly other sections of the basin that could be constructed that would provide storage water.

These are just three of many suggestions that we have detailed in the written statement. I would add that we can elaborate on these and have some sort of report prepared by October. Idaho hopes that all the tasks we have identified could be part of such a plan by the Federal agencies to address the declining salmon stocks in the Snake River basin.

It is, of course, a given fact that it will take a combination of actions required to solve the flow problems faced by salmon and yet provide for the other uses and needs of the region. A true balance of water, fish, wildlife, electricity, navigation, irrigation, and recreation must be struck. The States and other key players in the region should all be part of the solution. Idaho has in the past, and will in the future, do its part to protect this valuable resource. We believe now is the time for Federal agencies that constructed and operate the Columbia and lower Snake River dams to increase their efforts. Thank you.

[The statement follows:]

STATEMENT OF GOV. CECIL D. ANDRUS

The state of Idaho is pleased to have the opportunity to appear at this hearing and present the state's views on the potential listing of Columbia and Snake River salmon as threatened and endangered species.

Idaho-origin anadromous fish have long been an important mainstay of Idaho's fishing opportunities, and are significant to many local economies in Idaho. The Snake River runs are also important to the region as a whole. The Snake River above Lewiston historically produced an estimated 55 percent of the total summer steelhead trout, 40 percent of the spring chinook salmon, and 45 percent of the summer chinook salmon. Idaho's Stanley Basin was described as "teeming with red fish," or sockeye salmon.

Snake River run coho are extinct, sockeye are nearly gone, and fall chinook are not far behind. Other Idaho runs are in a depressed status. Overall, salmon and steelhead runs in the Columbia River are only 15 percent of previous run sizes.

The state of Idaho has displayed a long and consistent concern for Idaho-origin anadromous fish. The Idaho Fish and Game Commission has taken actions such as: 1) not allowing a general sport-fishing salmon season since 1977; 2) working with the Shoshone-Bannock and Nez Perce tribes to restrict tribal harvest; and 3) requiring catch-and-release sport fishing of wild steelhead. The Idaho Water Resource Board's State Water Plan provides a ". . . policy of the state of Idaho to preserve and enhance the state's anadromous fishery resource." Also, the state is developing a comprehensive river plan that will ensure additional protection for the state's anadromous fish runs.

Habitat protection and enhancement projects are in place. The quality for spawning and rearing anadromous fish is improved. Idaho has in place an innovative water quality program with interests from industry, conservation, sportsmen and Indian tribes working together to control nonpoint source pollution from logging, mining and agriculture.

Idaho went to court seeking an equal voice with the downriver states to constrain downriver fisheries in order to provide a reasonable margin of safety for Idaho runs. When Bonneville Power Administration (BPA) proposed to expand the intertie, Idaho sued BPA, which forced the agency to enter into a spill agreement that will aid anadromous fish migration. Currently, the state of Idaho is seeking relief for wild "B" run steelhead before the U.S. 9th Circuit Court of Appeals.

Notwithstanding the efforts of the state of Idaho, several important anadromous species are either extinct or close to it. The loss of this resource is largely attributable to one thing -- the construction and operation of huge dams on the Columbia and lower Snake rivers. The federal agencies that constructed and operate the Columbia and lower Snake River dams have not successfully protected or increased the remaining fish runs.

Efforts made to conserve and rebuild the fish runs, including hatcheries, habitat improvement, and harvest measures taken by the state of Idaho and other public agencies have not succeeded. The primary reason is that unacceptably high fish mortality occurs during spring out-migration in the lower Snake and the Columbia rivers. Overharvest is also a problem, and will remain so as long as runs are depressed.

The Columbia River dams operate to meet hydropower needs to the detriment of anadromous fish--this despite

congressional intent that both power generation and fish passage be on an equal basis. Because of this failure to provide for both energy and fish, private citizen groups have acted to petition the National Marine Fisheries Service (NMFS) for listing of spring, summer and fall Snake River chinook, and lower Columbia River wild coho, and the Shoshone-Bannock Tribe has petitioned for listing Snake River sockeye.

While the state of Idaho strongly supports the preservation and enhancement of our anadromous fishery resource, Idaho is very concerned about the potential effects that an endangered species listing will have on the activities of federal government agencies in the Columbia River Basin. There is much speculation that a recovery plan under the Endangered Species Act could cause a major upheaval to existing federal government activities in the region.

The National Marine Fisheries Service and their regional director Mr. Rollie Schmitten have a large task before them. Idaho will support and assist as needed in the biological assessments that will be made on the Snake River runs. Idaho fully agrees with the state of Oregon that NMFS conduct an open scientific review with ample opportunity to comment by interested parties. Far too often, Idaho has not had the opportunity for full participation in downriver fishery decisions that affect Idaho runs.

Idaho believes more can be done in additions to a biological assessment. We prefer that federal agencies and the region begin to act now and examine ways to conserve and rebuild the anadromous fish runs before a possible listing.

The System Operation Review study by the Bonneville Power Administration, U.S. Army Corps of Engineers and Bureau of Reclamation provides one opportunity to formulate a detailed plan of action. Idaho believes that the System Operations

Review process should move swiftly, and should comprehensively review all opportunities to improve flow conditions to protect and rebuild the fish. Studies under the Swan Falls agreement will also be helpful.

Idaho believes both federal and state governments have a role in rebuilding the anadromous fish runs. For example, Idaho Fish and Game is involved in negotiations with BPA to ensure the Non-Treaty Storage Agreement does not harm fish. The state gained a tentative commitment from BPA to pursue continued Idaho Power Company participation to enhance flows. Idaho also is negotiating a study of the feasibility and effects of renting water from Idaho Water Banks on the survival rate of smolt through the system. To carry out the study, Idaho supports increased flows from storage projects in Idaho.

Additional flows through the water rental pilot project are, however, only a partial and short term measure. Idaho's willingness to commit storage water for enhanced flows does not imply that we accept this alternatives as the solution to the slackwater problem on the mainstem dams. Idaho believes that the federal projects on the Columbia River must change operation criteria to create flow rather than placing the burden for flows solely on Idaho reservoirs that are not responsible for the flow problem. Additionally, downstream states must commit to supplying water for flows as well as commit to control of harvest in ocean and Columbia River fisheries to allow the limited numbers of adult salmon, especially wild fish, to pass through to Snake River spawning grounds. Idaho believes that downstream water and harvest managers must respond to our commitment to augment water flows for this pilot project.

Finally, Idaho suggests the region begin to explore positive actions toward recovery, while the biological assessment on the fish is moving forward. Congress can play a constructive role here by specifically budgeting some or all of these activities as outlined. Often, without Congressional direction, suggestions to federal agencies to take a different look at their operations fall on deaf ears.

Tasks:

- Explore ways to modify the Snake River Basin reservoir flood control rule curves, and shift flood control responsibility to Columbia River projects. This shift will allow space now evacuated for flood control to store water for enhancing instream flows.
- Implement operation changes at mainstem dams to mitigate their effects on fish passage. For example, consider utilizing the considerable forebay storage in these reservoirs for "flushing" of downstream migrating juvenile fish. Drawing down mainstem reservoirs during the spring migration period would reduce cross sections, increase velocity, reduce demands on upstream storage, and provide flood control protection. Higher velocities would improve flows for fish, thereby reducing the need for greater volumes of water.
- Explore the feasibility of constructing and operating smolt collection facilities upstream of Lower Granite Reservoir.
- Stop the winter energy releases at Dworshak. This measure will ensure reservoir refill in low-water years and will provide more water for enhancing instream flows.

- Use energy-storage options more creatively. For example, store energy surplus generated during fish migration periods with BC Hydro, California, and regional utilities.
- Develop a marketing and transmission strategy to shape electrical load so that fish flows are integrated into the Firm Energy Load Carrying Capabilities, i.e., so that fish flows and energy flows are synonymous.
- Study opportunities for providing additional water flows (if found to be effective) from new storage reservoirs (such as Galloway) to be constructed in the watershed specifically for such purpose.
- Add new generating facilities to other existing dams in the system. For example, in the Willamette, this addition could maintain a supply of firm energy and provide flow relief for fish.
- Devote a small percentage of Canadian storage over which the region has control to maintain a supply of firm energy, while providing flow relief in the Snake and Columbia rivers.
- Implement water and energy conservation measures. Water conservation offers enormous opportunities to enhance mainstem flows for fish without affecting energy supplies.
- Integrate needed fish flows into planning for regional energy and for new generating facilities.

The foregoing represents what the state of Idaho believes should be part of an aggressive plan by the federal agencies to address the declining salmon stocks in the Snake River drainage. Idaho believes that Bonneville and the Corps can move quickly to study and act on these proposed actions.

It is, of course, a given fact that a combination of actions will be required to solve the flow problem faced by salmon and yet provide for the other uses and needs of the

region. A true balance of water for fish, wildlife, electricity generation, irrigation and recreation must be struck. Action to implement these proposals could provide the basis for avoiding a listing of one or more salmon stocks as threatened or endangered species and would allow the Pacific Northwest to rebuild our fishery without the drastic actions that may come under the Endangered Species Act. Idaho has in the past, and will in the future, do its part to protect this valuable resource. It is now time for the federal agencies that constructed and operate the Columbia and lower Snake River dams to increase their efforts.

Senator HATFIELD. Thank you, Mr. Brunelle.

Gentlemen, I have heard from you, and frankly, I am aware that your respective Governors and the States you represent—Oregon, Washington, Idaho—agree that there should be an attempt to move together a regional initiative to try to find a predecisional policy that could help us in better managing the river. Is that correct?

Mr. SILVER. Yes.

Mr. YADEN. Certainly correct from the State of Oregon.

Mr. BRUNELLE. Yes; we discussed this at the meeting of Columbia basin States.

Senator HATFIELD. Does October 1 seem to be a reasonable timeframe in which to come up with some consensus of action?

Mr. SILVER. Yes.

Mr. YADEN. Senator Hatfield, I believe that is a reasonable time period to come up with a process and the rules of the game. I am not sure that it is sufficient time to come up with all of the management options that might be needed in the plan. I suspect that might take a little longer, but that is appropriate. October 1 is a very reasonable deadline for having our house in order.

Mr. BRUNELLE. Senator Hatfield, I believe by October 1 you will not have answers, but we will be able to find the right questions to ask.

Senator HATFIELD. Perhaps options can be arrived at. Do you agree that we ought to move as expeditiously as possible to develop some kind of regional consensus of regional action, and that October 1, therefore, should become one of those goals that at least will move us down that road with some speed to getting the fine points worked out?

Mr. YADEN. Yes.

Mr. SILVER. Yes.

Mr. BRUNELLE. Yes.

Senator HATFIELD. Gentlemen, I am very grateful to you for taking this Saturday to come here to testify. I now ask my colleague to ask his questions and, following Mrs. Unsoeld's questions, we will take a brief recess and give our reporter a break.

Mr. WYDEN. Thank you, Senator.

Just a couple questions. I think all of you made excellent presentations. I think very much that you described this Federal-State relationship as a partnership in the area of fish protection that is so important. I think the Federal Government has got to be a better partner to promote the fish protection.

My question to you is, can you gentlemen identify some past instances, some instances in the past recent Federal policies that you think have set back the effort of fish protection? I think it would be helpful, you all on the front lines, it would be helpful to see if there were some steps in the past that might have contributed to this to share and go forward. Let me start with you—Let us go down the line.

Mr. SILVER. You started at the wrong end of the line to identify—I am not an expert on our fish issues, and I yield to my colleagues instead.

Mr. WYDEN. In a positive way so that we can—there are some instances I think obviously come to mind. Oregon for a long time has been concerned by some of the dilly-dallying by the Corps. That would be one that comes to mind. Why don't we see if there are others.

Mr. FISHER. Congressman, I think that this is important to us in some respect——

Senator HATFIELD. We are all having problems hearing. If you would pull the mike closer to you.

Mr. FISHER. Sorry. I think that, like I say, generally a lot of this has been, from my perspective, a learning experience initiating some crossbills and Federal agencies that are involved. We have been in a lot of discussions with Bonneville over flow issues and spill issues. We have worked with some of those, and I am sure we will continue to do that. I will be glad to see we will be part of setting up tables and areas in which to work. I think the issues relating to bypass are major issues.

Mr. WYDEN. How about the problems of coordinating fish protection policy with the Federal Government? Mr. Schmitten was very candid about concerns in this area and a lot of agencies involved. Has that been a factor?

Mr. FISHER. It has been a factor. We spent a lot of time discussing instances here which were discussed with the users' issues. Actually we have been fairly successful. The problem is getting down and saying what our concerns are and us understanding also how they operate.

Mr. WYDEN. Idaho want to add anything?

Mr. BRUNELLE. First question, obviously, State of Idaho cried foul when the intertie was proposed, and we went to court over that.

Probably the other institutional problem from Idaho's perspective is that we are not a member of compact on the fish, and that strain has always been a problem with the State of Idaho. Decisions have been made, allocations have been made that the State of Idaho has not been a part.

Mr. WYDEN. Let me ask one other question, and that is about the role of the Northwest Power Act. It is a decade old, put on the books; and I think one of the reasons we are here is because it is

not working, has not done what we thought it would in the last decade.

One of the concerns I have is the approach that has been used has essentially been a bean-count approach, set fish goals in terms of quantity and not quality. Sort of like the story of central planning in Russia. Commissar for carpentry wanted more nails so he set a very high quota. So the factory made only the smallest nails to pump up numbers. Commissar saw his mistake. Commissar changed his order to pounds of nails, and the factory made only big spikes.

And this question of whether we are getting into the situation where Bonneville has set a quota and then the rivers using only hatchery fish seems to me to be one worth discussing.

I realize in your comments on this question, the way Bonneville implemented the Power Act, now a decade old, and whether you think that contributes to the problem. Start at this end.

Mr. BRUNELLE. Whether Bonneville is a problem or the council?

Mr. WYDEN. Is guess that is technically correct: Council.

Mr. BRUNELLE. We feel the council has been very constructive in subbasin planning for potentials for enhancement of advanced fish stocks in the subbasin for Bonneville. We feel that the council courageously took probably the right steps in affected areas of the plan.

The council, however, has not addressed what the State of Idaho feels is the main problems, and that is the mainstem facet issues. Ten years into the Power Act, fish and power we have put into law, but we have not seen it for real yet. I guess that is all I have at this time.

Mr. WYDEN. Oregon.

Mr. FISHER. I would agree with what the State of Idaho has said. Ideally, the council was set up and would solve the problems. I think we are learning more about the problems now about hatcheries. Hatcheries were thought at one point to be the savior of lost habitat. We are finding out that may not be the case at all. It has been a learning experience. We are discovering that the problem is the fish are suffering from the previous concerns that people thought were taken care of. The council is in a position that is a critical position, one that says things are getting tougher, and those decisions to make are related to fish and power.

Mr. WYDEN. Washington want to add?

Mr. SILVER. Things were very different in the 1980's than we anticipated when Power Act was enacted, I think in particular some of these affected areas, programs, which are something we are looking at in Washington State to better deal with the issues. We are taking the issues from council in that respect.

But I hesitate to say the council has failed us. What we have here in recent months is a question of whether or not we have just gotten many large spikes or small spikes and a few large spikes. Whether or not council is the correct institution is one we are undecided on. We are very pleased by our representation on the council.

Mr. WYDEN. I understand we are as well. We are not here other than to look at the kinds of approaches that make sense for the future. And what I want to hear and you all are in a very tough

spot on is whether you think we focus more on setting officials in terms of quantity rather than qualitative kinds of judgments. And my sense is that we have. Maybe we can wrap up with that. Oregon agree with that?

Mr. FISHER. Yes; I think so. Many people who accuse the agencies of not caring about wild fish, some of these discussions have gone on. I do not think I necessarily agree with that. What we have been trying to do is balance that problem we are running into, which is we are not getting enough wild stocks back. We do have a problem, and now we have to do something.

Mr. BRUNELLE. Mr. Congressman, I think it is quality versus quantity, the issue of mixed stocks, hatchery versus wild fish. And how that weakens some of the wild fish stocks is really one of the problems we have not faced head-on.

Mr. WYDEN. Want to add anything, Dave?

Mr. YADEN. Congressman Wyden, just a comment on the act and role of the council. The act—we are measurably better off because we have had the act under the council. There have, on power side and fish side, been successes and failures. We have concentrated more on the Endangered Species Act because it tends to change the rules of the game and it is a process we would like to fine tune for fish and power.

Mr. WYDEN. I think that is a fair comment, and as Mr. Silver from Washington very correctly points out, the 1980's have been very different than people thought, whether it is WPPS or whatever you want to say.

I note I am going to call a gentleman from Michigan very soon called John Dingle asking what happened with the Northwest Power Act in relation to the fishing stocks. That was an area where he really felt that a Member of Congress championed the cause of fish protection, and he was going to give us a hand. And when he asks us about our track record in this area, we are going to have trouble explaining some of the decisions made in the 1980's and some of the problems we have on our hands now given the fact that leadership in the Congress helped us way back in 1980. What did we get for it? We will be working real close with you. You have made some very helpful comments. And I want to also say I share your view about those several areas of council activities.

Congresswoman from Washington.

Ms. UNSOELD. Thank you. You heard the proposal that Goldschmidt outlined and participation that would be available to that State. Do you feel that that is an adequate or sufficient role? Is there something else that U.S. States would like to do in that process? In addition to the predecisional management plan.

Mr. SILVER. Congresswoman, we do support the initial process. We are very close in contact with the commission and very pleased with the work done on it.

Mr. FISHER. From our respects, State of Oregon is also pleased with the process and hope that we are included in the peer review group of our scientists.

Mr. BRUNELLE. Generally I would concur. Oregon and Washington would certainly follow up on discussion we have about funding to be able to deal with issues, and I think if there is going to be a funding question at the State level as well, whether that is some-

thing the State can work out with Federal Government is one we need to discuss.

Ms. UNSOELD. Thank you. That is all.

Senator HATFIELD. May I just close this part of our hearing prior to the recess by again thanking the representatives of the Governors. I would only say that when we were talking about a regional initiative, I would not want to imply it is going to be that easy. I think we have to be very realistic and we are going to have to talk around some very tough, tough decisions. Whether it is harvest restrictions—let us lay it out on the table. Whether we talk about harvest or some of those other hot-button items, we are going to have to deal with that. We are all very much aware of the proposals going to the public press and other communications, organizations that have discussed it. We are very much aware of that part of the recovery plan for the regional issue.

Congressman Wyden led off in his statement the possibility of racheting down power production. We do not want in any way to indicate that that initiative taken at the regional level would be easy, especially as it would have to deal with all these hot-button items.

But I still feel that in to be masters of our destiny, we have to take the opportunity to do this, and I also think the timeframe is on our side—to make a more modern impact on some of these components that have to be initiated.

So we are talking about tough questions and tough problems. And with that in mind, I still have confidence. When you stop and think about the resources we have and extraordinary records of our State agencies, when you think about the extraordinary stature of our universities and colleges in fishery data base and science, when you think about the extraordinary record of our Indian tribes in resolving tough fish problems over the last number of years, and when you think about the record of our private conservation, nonpublic groups that have monitored and developed data bases and developed expertise, we have a lot going for us.

It is not like we are out here with our shirttail ends hanging out. We have a lot going for us: expertise, data, Federal agencies. I will match our regional agency directors—whether it is Bonneville, Corps, fisheries, or whatever—we have got an extraordinary resource in our Federal regional people. We have faced tough ones before in these interrelationships.

By the same token, while I point out tough problems, I do not want to indicate we are not without the capacity or without the record or expertise. We have all that. I am confident we will come up with that.

We will have a brief recess.

[A brief recess was taken.]

Senator HATFIELD. I would like to ask the next panel to come forward: Gen. Pat Stevens of the U.S. Army Corps of Engineers; Mr. John W. Keys III, Regional Director, Pacific Northwest Region of the Bureau of Reclamation; Mr. Angus Duncan, member of the Northwest Power Planning Council; Ted Strong, executive director of the Columbia River Intertribal Fish Commission; and Mr Jim Jura, Administrator, Bonneville Power Administration. That constitutes panel 3.

Gentlemen, we are very pleased to have you here to contribute to our hearing, and would you begin?

STATEMENT OF GEN. PAT STEVENS, DIVISION ENGINEER, NORTH PACIFIC DIVISION, U.S. ARMY CORPS OF ENGINEERS

General STEVENS. Senator Hatfield, I am Gen. Pat Stevens. Sir, I am going to summarize my remarks.

Senator HATFIELD. Your full statement will be placed in the record, General. I appreciate it.

General STEVENS. Senator and Congressman Wyden and Congresswoman Unsoeld, I welcome this opportunity to present the Army Corps of Engineers' view on the ongoing review process we will be discussing.

The Corps recognizes the potential impact to the region is significant. There are three major points I would like to emphasize today.

The Corps has a long-standing commitment to the Columbia River fish resources.

We fully support objective scientific studies and will fully participate to determine if a listing is appropriate and to identify acceptable actions for rebuilding any depleted salmon runs.

Third, fish passage at the dams is one element in rebuilding salmon runs. A full solution will require a comprehensive analysis of other impacts such as hatchery disease, ocean and river fisheries, and habitat degradation.

The Corps' eight lower Columbia and Snake River water resource projects serve a variety of needs, as you know: hydropower, flood control, navigation, recreation, and fish and wildlife conservation.

Because the adult and juvenile salmon must pass through or around these projects, the Corps has, since construction of Bonneville in 1938, provided for fish passage. We pioneered and built effective adult fish ladders and continued development and installation of juvenile fish bypass systems. We have been transporting juvenile fish, up to 20 million annually, collected at upriver dams.

The Corps has, through 1989, invested over $500 million in fish facilities at its Columbia basin projects. I want to emphasize the cooperative nature of these accomplishments. They have been the result of teamwork with Federal, State, and tribal agencies.

In spite of these efforts, some salmon runs have declined.

What can we in the Pacific Northwest do to assist National Marine Fisheries Service in their effort?

It will require an open, objective scientific analysis to determine if listing is appropriate. There is a pressing need for a more complete understanding of fishes' life history. That must be a reasoned scientific process. We have a role in that process.

In that regard, I applaud the initial steps made by National Marine Fisheries Service.

I can only speculate on what future actions may be needed to rebuild depleted salmon runs. I can tell you that the Corps is presently carrying out a series of activities which I believe will further benefit these runs. They include, among others:

The President's 1991 budget representing a commitment to continue a program of juvenile fish bypass installation estimated at $139 million and his request to the Congress for $14.8 million in this next fiscal year.

Flow augmentation, better known as the water budget, is being provided in the Snake and Columbia Rivers during spring migration; new fish transport barges and facilities are being brought on line; and over $3 million each year in research is being funded by the Corps.

In closing, I recognize the Corps' activities focus on in-river assistance to the fish. That represents only one facet of the life cycle of these fish. Diseases continue to decimate hatchery stocks; overharvesting continues to diminish the stocks; mixed-stock fisheries impact depleted runs; and habitat degradation from several activities continues. All of these fish survival questions must be addressed. Together with cooperation with Federal, State, and agency representatives of the Pacific Northwest, we can do that. We pledge our support, Senator. Thank you very much.

[The statement follows:]

STATEMENT OF GEN. PAT M. STEVENS IV

I WELCOME THIS OPPORTUNITY TO PRESENT THE ARMY CORPS OF ENGINEERS' VIEWS ON THE ONGOING REVIEW PROCESS TO CONSIDER CERTAIN COLUMBIA RIVER BASIN SALMON SPECIES FOR LISTING UNDER THE ENDANGERED SPECIES ACT. THE CORPS RECOGNIZES THAT THE POTENTIAL IMPACT ON THE REGION IS SIGNIFICANT AND WIDESPREAD AND WE WILL FULLY COOPERATE IN THE PROCESS.

THERE ARE THREE MAJOR POINTS I AM GOING TO EMPHASIZE TODAY:

- THE CORPS HAS A LONGSTANDING COMMITMENT TO THE COLUMBIA RIVER FISH RESOURCES.

- WE FULLY SUPPORT OBJECTIVE, SCIENTIFIC STUDIES AND WILL FULLY PARTICIPATE TO DETERMINE IF A LISTING IS APPROPRIATE AND TO IDENTIFY ACCEPTABLE ACTIONS FOR REBUILDING ANY DEPLETED SALMON RUNS.

- FISH PASSAGE AT THE DAMS IS ONE ELEMENT IN REBUILDING SALMON RUNS. A FULL SOLUTION WILL REQUIRE A COMPREHENSIVE ANALYSIS OF OTHER IMPACTS SUCH AS HATCHERY DISEASE, OCEAN AND RIVER FISHERIES AND HABITAT DEGRADATION.

THE CORPS' EIGHT LOWER COLUMBIA AND SNAKE RIVER WATER RESOURCE PROJECTS SERVE A VARIETY OF NEEDS.... HYDROPOWER, FLOOD CONTROL, NAVIGATION, RECREATION AND FISH AND WILDLIFE CONSERVATION. BECAUSE ADULT AND JUVENILE SALMON MUST PASS THROUGH OR AROUND THESE PROJECTS THE CORPS HAS, SINCE CONSTRUCTION OF BONNEVILLE DAM IN 1938, PROVIDED FOR FISH PASSAGE. WE HAVE PIONEERED AND BUILT EFFECTIVE ADULT FISH LADDERS AND CONTINUED DEVELOPMENT AND INSTALLATION OF JUVENILE FISH BYPASS SYSTEMS. SINCE 1980 WE HAVE BEEN TRANSPORTING JUVENILE FISH, UP TO 20 MILLION ANNUALLY, COLLECTED AT UPRIVER DAMS PAST ALL DOWNSTREAM PROJECTS. WHERE LOSSES COULD NOT BE AVOIDED, HATCHERIES HAVE BEEN CONSTRUCTED. TEN OF THESE HATCHERIES ARE NOW OPERATING AND RELEASING OVER 40 MILLION FISH

ANNUALLY. ANOTHER ONE IS SCHEDULED FOR COMPLETION IN 1991. PUT IN PERSPECTIVE, THE CORPS HAS, THROUGH 1989, INVESTED OVER $550 MILLION IN FISH FACILITIES AT ITS COLUMBIA BASIN PROJECTS. THIS REPRESENTS NEARLY 13 % OF THE TOTAL INVESTMENT AT THE CORPS' EIGHT LOWER COLUMBIA AND SNAKE RIVER PROJECTS. I WANT TO EMPHASIZE THE COOPERATIVE NATURE OF THESE ACCOMPLISHMENTS. THEY HAVE BEEN THE RESULT OF TEAM-WORK WITH FEDERAL, STATE AND TRIBAL AGENCIES.

IN SPITE OF THESE EFFORTS, SOME SALMON RUNS HAVE DECLINED AND NATIONAL MARINE FISHERIES SERVICE IS NOW CONSIDERING PETITIONS CALLING FOR SEVERAL SALMON STOCKS TO BE LISTED AS THREATENED OR ENDANGERED.

WHAT CAN WE IN THE PACIFIC NORTHWEST DO TO ASSIST NATIONAL MARINE FISHERIES SERVICE IN THIS EFFORT?

FIRST WE MUST APPROACH THE PROCESS IN AN ATMOSPHERE OF MUTUAL TRUST AND CONCERN. IT WILL REQUIRE AN OPEN, OBJECTIVE, SCIENTIFIC ANALYSIS TO DETERMINE IF LISTING IS APPROPRIATE TO PROTECT SPECIFIC STOCKS AND TO IDENTIFY AND IMPLEMENT ACCEPTABLE ACTIONS NECESSARY TO REBUILD ANY DEPLETED FISH RUNS. THERE IS A PRESSING NEED FOR A MORE COMPLETE UNDERSTANDING OF THE FISHES' LIFE HISTORY IF WE ARE TO FORMULATE EFFECTIVE REMEDIES THAT ARE CONSIDERED NECESSARY TO REBUILD THE POPULATION OF ANY LISTED SPECIES. IT MUST BE A REASONED SCIENTIFIC PROCESS.

WE ALL HAVE A ROLE IN THAT PROCESS IF WE ARE TO OBTAIN THE BEST POSSIBLE KNOWLEDGE UPON WHICH TO ACT.

IN THAT REGARD, I APPLAUD THE INITIAL STEPS TAKEN BY NATIONAL MARINE FISHERIES SERVICE IN ESTABLISHING A TECHNICAL COORDINATING COMMITTEE WITH WIDE, INTER-AGENCY MEMBERSHIP, SETTING UP A HIGHLY CREDIBLE ACADEMIC TEAM TO AID IN THE SCIENTIFIC REVIEW AND, IMPORTANTLY, CONDUCTING THE REVIEW PROCESS IN A PUBLIC FORUM.

I CAN ONLY SPECULATE ON WHAT FUTURE ACTIONS MAY BE NEEDED TO REBUILD ANY DEPLETED SALMON RUNS. I CAN TELL YOU THAT THE CORPS IS PRESENTLY CARRYING OUT A SERIES OF ACTIVITIES WHICH I BELIEVE WILL FURTHER BENEFIT THESE RUNS:

- THE PRESIDENT'S FY 91 BUDGET PRESENTS A COMMITMENT TO CONTINUE A PROGRAM OF JUVENILE FISH BYPASS INSTALLATION ESTIMATED AT $139 MILLION AND REQUESTS $14.8 MILLION TO CONTINUE DESIGN AND CONSTRUCTION OF JUVENILE BYPASS FACILITIES AT FOUR OF THE MAINSTEM PROJECTS AND $1 MILLION TO EVALUATE ADDITIONAL MEASURES AT OTHER CORPS DAMS WHICH COULD CONTRIBUTE TO INCREASED FISH SURVIVAL.

- FLOW AUGMENTATION - BETTER KNOWN AS THE WATER BUDGET - IS BEING PROVIDED IN THE SNAKE AND COLUMBIA RIVERS DURING THE SPRING MIGRATION PERIOD TO INCREASE SURVIVAL OF JUVENILE FISH MIGRATING TO THE OCEAN.

- NEW FISH TRANSPORT BARGES AND FACILITIES ARE BEING BROUGHT ON-LINE TO PERMIT MORE JUVENILE FISH TO BE HAULED FROM THE UPPER-MOST DAMS PAST ALL OF THE DOWNSTREAM RESERVOIRS AND DAMS.

- OVER $3 MILLION EACH YEAR IN RESEARCH IS BEING FUNDED BY THE CORPS TO DEVELOP AND IMPROVE MEANS OF ASSISTING MIGRATING FISH.

- THE CORPS IS PARTICIPATING WITH BONNEVILLE POWER ADMINISTRATION AND THE BUREAU OF RECLAMATION IN A COMPREHENSIVE REVIEW OF THE OPERATION OF THE MULTI-PURPOSE COLUMBIA RIVER PROJECTS. THAT REVIEW WILL CONSIDER SYSTEM OPERATING SCENARIOS THAT MAY FURTHER ASSIST COLUMBIA BASIN FISH AND WILDLIFE RESOURCES.

I RECOGNIZE THAT THE CORPS' ACTIVITIES FOCUS ON IN-RIVER ASSISTANCE TO THE FISH. THAT REPRESENTS ONLY ONE FACET OF THE LIFE CYCLE OF THESE FISH: DISEASES CONTINUE TO DECIMATE

HATCHERY STOCKS, OVER-HARVESTING CONTINUES TO DIMINISH THE STOCKS, MIXED-STOCK FISHERIES IMPACT DEPLETED RUNS, AND HABITAT DEGRADATION FROM SEVERAL ACTIVITIES CONTINUES. ALL OF THESE FISH SURVIVAL QUESTIONS MUST BE ADDRESSED. I AM CONFIDENT THAT TOGETHER WE CAN SEEK SOLUTIONS WITH THE COOPERATIVE EFFORTS OF FEDERAL, STATE, TRIBAL, AND PUBLIC INTERESTS IN THIS WORTHWHILE ENDEAVOR.

AGAIN WE PLEDGE OUR SUPPORT IN THIS EFFORT. THANK YOU.

Senator HATFIELD. I will let you select your next speaker.

STATEMENT OF JIM JURA, ADMINISTRATOR, BONNEVILLE POWER ADMINISTRATION

Mr. JURA. Senator Hatfield, Congressman Wyden, Congresswoman Unsoeld, it is a pleasure for me to be here to have an opportunity to discuss the issues raised by these petitions to list several species of the Columbia River salmon under the Endangered Species Act. I would like to first summarize the key points of my testimony to be submitted in the record.

Senator HATFIELD. It will be submitted.

Mr. JURA. Thank you. First BPA is committed to protecting and enhancing the Columbia River basin's fishery resources. As species are reviewed under the Endangered Species Act, we will be an active, positive participant.

Second, we should not lose sight of the major environmental benefits that we receive from the Pacific Northwest hydrosystem.

And third, we endorse a full scientific review involving a public process that enables all viewpoints to be presented and debated so that any actions taken will find regional acceptance as sound solutions.

Northwest hydropower provides major environmental benefits. Our hydrosystem ensures clean air and saves our land and water resources from acid rain. It not only protects the air and water resources of the Northwest, it also displaces fossil fuel generation in the Southwest.

In the 10 years since Congress passed the Northwest Power Act, significant progress has been made in the management of the Columbia River fishery.

Senator Hatfield, I would like to take a moment to thank you for the leadership you have expressed and shown year after year to help us in that endeavor.

The region, led by the Northwest Power Planning Council, has forged a productive, flexible fish and wildlife program. As you have pointed out in your opening remarks, Senator Hatfield, we have invested a sizeable amount of ratepayer revenues to protect and improve the basin's fishery resources. No agency in the Pacific Northwest invests more in fish and wildlife than BPA does, and we fully intend to continue our current strong commitment to the Columbia basin's fish and wildlife resources.

We do not know how much a listing might affect the Northwest at this point; particularly how a listing might affect the operation of the Federal Columbia River power system. Predicting any impacts would be premature and speculative until the status review is completed, until the region knows all of the factors affecting each species, and until we know what actions will bring back more fish.

BPA would like to commend NMFS for the work it has done to date and for the process it has undertaken. NMFS has been extremely responsive and I am confident that they understand the importance of a process that will bring all the stakeholders to the table. We welcome their invitation to participate, and believe an open scientific process will encourage the development of a sound, supportable basis for decisions by that agency.

It is not enough to know, I believe, that the species we are discussing here have just declined from what they were in the 1960's. It is fair to ask why. For example, why are returns of coho on the lower river so low? These fish have no dams to contend with. And why are the upriver fall chinook, which must pass four dams to spawn in the Hanford Reach, doing so well?

It is important that we focus our efforts on conducting the status review and addressing the issues that are raised by these reviews. However, the status review need not be our only focus at this time. BPA fully supports reviewing the acceleration of some activities under the council's fish and wildlife program. We believe the region lacks, at this point, a complete understanding of the various factors that have contributed to the decline of the Columbia River salmon.

This is particularly true for flows. On one hand, we know that altering streamflows will affect all users of the river; on the other hand, we believe the linkage between flows and fish survival, is poorly understood. Therefore, it would be premature to undertake in the short term significant revisions in the operation of the system.

For years the Northwest has been aware that several salmon species in the Columbia River basin have declined. The region has sought to address these issues in a number of ways: through legislation, the council's fish and wildlife program, and signing a treaty with Canada governing fish harvest.

We have yet to undertake a rigorous review of all the causes contributing to the declines. The Endangered Species Act petitions may offer us an opportunity to conduct open scientific studies to identify actions to increase the number of fish returning to the Columbia basin.

That concludes my comments. I will be pleased to take any questions you may have.

[The statement follows:]

STATEMENT OF JAMES J. JURA

INTRODUCTION

Mr. Chairman and members of the Committee, my name is Jim Jura, and I am the Administrator of the Bonneville Power Administration (BPA). We appreciate the opportunity to appear before you today to discuss the issues raised by the petitions to list several species of Columbia River salmon under the Endangered Species Act.

I would like to briefly summarize the key points in my testimony. To the extent hydroelectric operations impact fish resources in the Columbia River System:

- BPA is committed to protecting and enhancing the Columbia River Basin's fishery resources.
- We do not want to lose sight of the major environmental benefits of the Pacific Northwest hydrosystem.
- We endorse a full scientific review involving a public process that enables all viewpoints to be presented and debated, so that any actions taken will find regional acceptance as sound solutions.
- BPA, along with other Federal agencies, will be a positive, active participant in that process.

BPA IS COMMITTED TO FISH AND WILDLIFE

In the ten years since Congress passed the Pacific Northwest Electric Power Planning and Conservation Act, tremendous progress has been made. The region, led by the Northwest Power Planning Council, has forged a productive, flexible Fish and Wildlife Program. This Program is based upon the participation of state and Federal fishery agencies, Indian Tribes, utilities, and other regional interests.

Since passage of the Act, BPA has devoted $1 billion in electricity ratepayer revenues to protecting and improving the basin's fishery resources. Since almost 40 cents of every dollar committed to fish and wildlife in the Pacific

Northwest comes from BPA ratepayers, we are concerned about the status of those species. No agency in the Pacific Northwest invests more in fish and wildlife than we do.

Our efforts have contributed to positive results in the Columbia Basin. I would like to share with you a number of accomplishments.

Umatilla Basin

This year, a record number of spring chinook entered central Oregon's Umatilla River. So far, 2,100 fish have been counted--a remarkable number considering that only 13 came back in 1988, and 164 in 1989.

Spill Agreement

Last year, BPA, the state and Federal fishery agencies, and the Tribes signed a landmark 10-year Memorandum of Agreement. Under the Agreement, BPA will spill water at Federal projects to provide for fish passage until effective bypass screens are installed. We stand behind that agreement and are pleased by the inclusion of funds--to be repaid by BPA--in the Administration's budget for bypass screens at those Federal projects where prototype testing has demonstrated the screens will be effective.

Water Budget

Under the Water Budget program, BPA and the Corps of Engineers have released water in the spring to speed the downstream migration of juvenile fish. Normally this water would have been used at another time of the year in order to generate electricity during periods of high demand.

Hypothetically, the volume of water we release for fish during the spring months could create a river the average size of the Willamette as it flows by Portland. This "Water Budget River" could flow for fish, day in and day out, for two and a half months.

We fully intend to continue our commitment to the Columbia Basin's fish and wildlife resources. As species are reviewed under the Endangered Species Act,

BPA and other Federal agencies will be active, positive participants. We are aware that the Endangered Species Act could carry significant implications for our operation of the River.

IT IS TOO EARLY TO SPECULATE HOW A LISTING MIGHT AFFECT THE REGION

BPA and the interested parties do not know how much a listing might affect the Northwest. Guessing the impacts would be premature and speculative until:

- the status review is completed;
- the region understands all of the factors that may be affecting each species' decline; and
- we know what may be effective in addressing each of those factors.

WE ARE CONFIDENT NMFS WILL CONDUCT AN OPEN SCIENTIFIC PROCESS

The National Marine Fisheries Service (NMFS) has invited BPA and persons representing a wide variety of interests to participate in its status reviews. A broad review is crucial to the Endangered Species process. We welcome this invitation and look forward to NMFS continuing with these important steps to bring all of the interests to the table. The Columbia River is a regional asset that provides benefits to many users--irrigators, industries, recreation, fisheries, and the infrastructure that relies on these activities. An open, scientific process will encourage the development of a sound, supportable basis for decisions by NMFS. The entire region needs to understand and participate in the status reviews.

We believe NMFS should follow these principles:

1. All meetings of the committees NMFS will use to assist in its review should be public.

2. NMFS should perform the studies necessary to produce data where the region's knowledge is incomplete. These studies should produce the best scientific basis for decisions. Some of the scientific issues that need to be resolved are addressed later in my testimony.

3. NMFS should develop a reasonable schedule that allows interested parties sufficient time to analyze and comment on the issues, and for NMFS to consider this input before reaching conclusions.

4. NMFS should provide a public forum where scientists can interact directly and test their views.

Under these principles, the region will be assured of a broad-based approach that will produce the best science and the best results.

The status reviews for each species will raise difficult, puzzling questions. These questions will involve historical and current activities in many sectors: utilities, irrigated agriculture, fisheries, recreation, navigation—in short, any activity that is tied to the waters of the Columbia and Snake Rivers.

THE REVIEW WILL RAISE AND MUST RESOLVE DIFFICULT BIOLOGICAL ISSUES

It is not enough to know that the candidate species have declined from levels in the 1960s. We must ask why. Why are the returns of coho on the lower river so low? These fish have no dams to contend with. And why are upriver brights—which must pass four dams on the Columbia River—doing so well? In 1989, the number of upriver brights returning to spawn in the Hanford Reach on the Columbia River surpassed the escapement goals used by fishery managers to manage the run.

The petitions raise difficult biological issues. For example, what is a species? Are fish that spawn a hundred yards up a tributary to the Salmon River distinct from those which spawn just downstream from the point where the creek enters the River? Have hatchery and other fishery management programs harmed wild fish? BPA believes an active scientific debate and further studies are necessary to resolve these issues, and we are prepared to work with all of the interests in the region to address them.

This is not the time for simple, incomplete solutions. There is time to consider a measured response.

IT IS NOT TOO LATE TO INVESTIGATE POTENTIAL CAUSES AND SOLUTIONS

Given the schedule and structure provided under the Endangered Species Act, it is important that the bulk of our efforts be devoted to conducting the status review and addressing the issues that are raised by those reviews. This includes a scientifically based approach to determine all of the factors that have contributed to the declines. For example, the efforts should seek to understand the impact of the international drift net fishery and how other factors affect the survival of Columbia River fish.

But the status review need not be the only focus during the first year. In the short term, it may be possible to consider the tools Federal, state, and local bodies have at hand to address problems with specific stocks.

BPA would support a review of the potential for accelerating activities under the Northwest Power Planning Council's Program that could lead to improving the productivity and survival of the stocks under consideration for listing. Historically, the Council's Fish and Wildlife Program has focused in a general way on doubling salmon and steelhead runs in the Columbia Basin. Given the status of some stocks, it may be appropriate to focus efforts on specific actions that can be taken to increase wild fish stocks. For example, it may be possible to consider a captive brood stock program for sockeye salmon, or consider accelerating a review of the planning efforts in the Salmon River basin to increase the production of sockeye and chinook smolts.

We are aware that some would identify Columbia River streamflows as an issue in the NMFS study. We expect to address streamflows in a comprehensive review of hydrosystem operations which we are undertaking with the U.S. Army Corps of Engineers and the U.S. Bureau of Reclamation. BPA believes that the region lacks a complete understanding of the interactions among the various factors that contribute to the decline of Columbia River salmon. Therefore, it would be premature to undertake in the short term, significant revisions in the

operation of the hydrosystem. We continue to support studies that will help the scientific community and the region to determine the efficacy of flow augmentation on fish survival.

CONCLUSION

For years, the Northwest has been aware that several salmon species in the Columbia Basin are in decline. The region has sought to address these declines in a number of ways:

- signing a treaty with Canada governing fish harvest;
- settling legal claims among the States and Indian Tribes;
- funding fish bypass systems at Federal dams;
- enacting legislation such as the Mitchell Act, the Lower Snake River Fish and Wildlife Compensation Plan (authorized by the Water Resources Development Act of 1976), the Magnuson Fishery Conservation and Management Act, and the Pacific Northwest Electric Power Planning and Conservation Act;
- and implementing the Northwest Power Planning Council's Fish and Wildlife Program.

The Council's Fish and Wildlife Program incorporated dramatic and comprehensive measures to protect and enhance the Basin's fishery resources. We can demonstrate clear successes under this Program. But these successes are not shared among all species in the basin. We need to understand why some species are doing well and others are not.

Northwest hydropower is a national asset. It provides major environmental benefits. The hydro system ensures clean air and protects our land and water resources from acid rain. It not only protects the air and water of the Northwest, but also displaces generation in the Southwest that relies on fossil fuels.

The region has yet to undertake a rigorous review of all the causes contributing to the declines. The Endangered Species Act petitions offer an

opportunity and incentive to conduct scientific studies to identify actions that will increase the number of fish returning to the Basin. And, the petitions place the responsibility for addressing these questions on all of the interests in the Northwest.

This concludes my testimony. I would be pleased to answer any questions you may have.

STATEMENT OF JOHN W. KEYS III, REGIONAL DIRECTOR, PACIFIC NORTHWEST REGION, BUREAU OF RECLAMATION

Mr. KEYS. Senator Hatfield, Congresswoman Unsoeld, Congressman Wyden, I am John Keys, Pacific Northwest Regional Director for the Bureau Reclamation in Boise. I am very pleased to be here, and I will summarize my report now.

Senator HATFIELD. Thank you. It will be included in the record.

Mr. KEYS. The Bureau of Reclamation has been an active participant for resource development in the Columbia River basin for nearly 90 years. There are many positive results from those projects, and those projects have been certainly a positive effect overall for the people of the Columbia River basin. There have also been some negative impacts, such as the impacts on the anadromous fish. Bear in mind, we are trying to be responsive to challenges brought on by these impacts.

Part of the mission of the Bureau of Reclamation is to work with the environment people, fish and wildlife agencies around our projects and for other interests. We have been working in the Yakima basin for nearly 10 years on the Hanford property and the construction of ladders and streams for the passage of anadromous fish around our projects. We are currently undergoing a construction on a replacement problem to replace the waters of the Umatilla River that are currently being diverted for irrigation and agriculture.

We also are actively involved in a joint capacity with Bonneville Power and the Corps of Engineers in a Columbia River system operation review. This joint effort will focus on the operation of Federal dams in the basin that operate under the State and Northwest coordination agreement.

An environmental impact statement will be prepared and made available to the three Federal agencies to make decisions on now and the Pacific Northwest coordination and Canadian allocation agreements.

Because the public processes associated with this effort are expected to fall into broad regional discussions that compete for demand on the basin's water resources, we will provide a comprehensive data base for future operational decisions. Anadromous fish needs and potential endangered species issues will be significant considerations in the conduct of this system's operation review. Coping means for this system's operation review held across Washington, Oregon, Idaho, and Montana starting on August 6 and running through August 21.

Cooperation between the Bureau of Reclamation, Bonneville Power, Corps of Engineers, and National Marine Fisheries is excellent this time. In my own opinion, it is never been better.

At this time it would be premature for us to project impacts from an Endangered Species Act listing of five salmon species. There is a potential for major effects throughout the basin.

The Bureau of Reclamation has a great deal of expertise in working with design, constructing, and operating facilities to cooperatively accommodate space for endangered species. We firmly believe the Bureau of Reclamation should be represented on appropriate study teams, committees, or groups to look into the Endangered Species Act listing. We are willing and want to work toward solutions to the endangered species designation problems.

Thank you for the opportunity to be here. I will be happy to answer any questions you might have.

Senator HATFIELD. Thank you very much, Mr. Keys.

[The statement follows:]

STATEMENT OF JOHN W. KEYS III

Mr. Chairman, I am John Keys, Regional Director for the Bureau of Reclamation's Pacific Northwest Region. I appreciate the opportunity afforded today to emphasize the deep interest that the Bureau has in activities related to endangered species considerations for Columbia and Snake River salmon.

For almost ninety years the Reclamation Program has been an integral part of the Pacific Northwest. Today, we are a primary manager and operator of Federal water projects in Idaho, Oregon, Washington, and western Montana. We have responsibility for 60 storage reservoirs with a combined storage capacity of nearly 25 million acre-feet. Main stem Columbia River operations are greatly influenced by our facilities at Grand Coulee and Hungry Horse. Our Minidoka, Palisades, Boise, and Payette Projects in southern Idaho control of much of the Snake River water resource.

- Irrigation water serves over 3 million acres of farmland with an annual gross crop value of nearly $2 billion.

- Hydroelectric powerplants produce an annual average of over 24 billion kilowatt hours of electricity, almost three times Seattle's annual power consumption.

- Over nine million recreational visits a year are now being enjoyed by the public at our facilities.

- The projects provide a portion of local and regional flood control.

While there are many positive aspects that result from the projects, their development earlier in the century had negative aspects such as the impacts upon the anadromous fishery.

Today, we are greatly aware of the competition surrounding the region's water supply and the needs of

the region's valued fishery. We recognize and are responding to these challenges by blending traditional project values like irrigation and power production with other values like fish and wildlife enhancement, public recreation, water conservation, streamflow restoration, and storage system optimization.

We are actively participating with the Northwest Power Planning Council, Bonneville Power Administration, Federal and state fishery agencies, Indian nations, and others to improve conditions for salmon and steelhead. We are doing this by providing improved streamflow conditions and modern fish passage and protective facilities in the Yakima and Umatilla Projects. Most recently, we initiated a pilot program for the subordination of generation at our two Yakima Project powerplants to make it possible to improve streamflows for salmon and steelhead. We continue to cooperate in meeting water budget objectives through our Grand Coulee and Hungry Horse operations as a way to assist migrating juvenile fish on the Columbia River.

While we are attempting to respond to changing needs, the statutory, contractual, and institutional requirements under which we operate must be recognized.

The water services that we provide are regulated by specific project authorizations, hundreds of contracts and agreements with water user groups and resource agencies, and provisions of state water rights held in conjunction with our projects.

- Project authorizations specify the purposes for which projects are to be operated and generally allocate water supplies among different uses. Through the years, as demands have increased, we have emphasized flexibility in the operation of our projects to achieve a higher level of multi-purpose benefits.

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- We have mandated repayment requirements on 36 Federal water projects in the Pacific Northwest and these encompass literally hundreds of contracts and agreements with water user groups and individuals.

- We have in excess of 500 water rights held in conjunction with our projects. These rights stipulate the uses of the water in accordance with state water laws.

Mr. Chairman, our responsibilities in managing the region's water resources require that we have an appropriate and direct involvement in activities related to endangered species considerations for Columbia and Snake River salmon. It is premature today for us to speculate what specific impacts future endangered species actions might have on our project operations and water service obligations. We do know, however, that there is potential for major effect if reallocations of the region's water supply are involved.

In the course of our project planning, development, and operations activities, we have gained significant expertise and experience that we would like to cooperatively "bring to the table" in the current endangered species considerations. It is necessary for the Bureau to be represented in appropriate coordinating activities addressing this important issue. We will continue to cooperate with the National Marine Fisheries Service and other Federal and state agencies to achieve this goal.

Thank you.

STATEMENT OF TED STRONG, EXECUTIVE DIRECTOR, COLUMBIA RIVER INTERTRIBAL FISH COMMISSION

Mr. STRONG. Senator Hatfield, it is good to see you again.

Senator HATFIELD. Nice to see you.

Mr. STRONG. We had a friendship once upon a time in your offices, and once again today. Congressman Wyden, Congressman Unsoeld, we are pleased that the Indian peoples of this region can share time today with you also to express our concerns. My name is Ted strong. I am executive director of the Columbia River Intertribal Fish Commission.

Our Columbia River Indian people have long inhabited this region and we welcomed your people to this region at one time to share its bounty. And they, once again, began to talk not so much about the science as you may know science, but life as the way an Indian person knows life. For that cultural difference is what the inherent and infinite wisdom of Congress granted the Indian people reserves based on treaties.

What we ask for is life-giving that will tie the Indian people forever to the lands on which they were created. For our sovereignty, unlike that of the United States, does not derive from its people. We, unlike the United States, were not formed by the people; we were formed by the Divine Creator. Our sovereignty derives not by mankind but from the spirit of man which was created in harmony with the Maker, and through our body flows the riches of our Mother Earth, and in our heart and in our soul the spirit of our Creator. And sovereignty derives from that. And our people do not speak as people but as children of the Creator, and we talk as though the Creator watches over us, understands us, and hears whether or not we are taking care of the land.

Thus we cannot come to argue too much the point of a man's insistence upon a law or management regime, for the policy and culture precedes that. And that is what we are here to talk about.

I would like to share a few moments of my introductory remarks with my venerable leader here, Levi George, chief tribal council chairman, one of the Columbia River people. He has also some introductory remarks to make to you this morning. Thank you.

[The statement follows:]

STATEMENT OF TED STRONG

SENATOR HATFIELD AND CONGRESSMAN WYDEN, THANK YOU FOR THE OPPORTUNITY TO TESTIFY ON THE SUBJECT OF THE RECENT PETITIONS REQUESTING PROTECTION OF COLUMBIA RIVER SALMON UNDER THE ENDANGERED SPECIES ACT. MY NAME IS TED STRONG AND I AM THE EXECUTIVE DIRECTOR OF THE COLUMBIA RIVER INTER-TRIBAL FISH COMMISSION. AS YOU KNOW, THE COMMISSION WAS FOUNDED BY THE CONFEDERATED TRIBES AND BANDS OF THE YAKIMA INDIAN NATION, THE CONFEDERATED TRIBES OF THE WARM SPRINGS RESERVATION OF OREGON, THE CONFEDERATED TRIBES OF THE UMATILLA INDIAN RESERVATION, AND THE NEZ PERCE TRIBE. THE COMMISSION WAS FORMED TO SUPPLY ITS MEMBER TRIBES WITH TECHNICAL ASSISTANCE IN THEIR MANAGEMENT OF COLUMBIA RIVER FISHERIES.

PEOPLE ARE EXPRESSING A RENEWED CONCERN OVER THE FATE OF COLUMBIA RIVER SALMON. A LITTLE MORE THAN TEN YEARS AGO THIS SAME CONCERN WAS EXPRESSED AND THE SAME QUESTION WAS ASKED: SHOULD SALMON OF THE COLUMBIA RIVER BASIN BE PROTECTED UNDER THE ENDANGERED SPECIES ACT? OUR TRIBAL PERSPECTIVE, HOWEVER, PREDATES THESE RECENT EVENTS. BECAUSE OF THIS HISTORY, I COME BEFORE YOU NOW WITH A SENSE OF URGENCY AND FRUSTRATION. URGENCY BECAUSE CERTAIN STOCKS OF SALMON HAVE CONTINUED TO DECLINE IN THE LAST TEN YEARS; FRUSTRATION BECAUSE THE TRIBES' REQUESTS TO BRING SALMON BACK TO THE UPPER COLUMBIA RIVER HAVE BEEN IGNORED FOR TOO LONG.

WHEN THE UNITED STATES NEGOTIATED TREATIES WITH THE COLUMBIA RIVER TRIBES, THE SALMON RAN FULL IN THE RIVERS OF THIS BASIN. THE DAILY LIVES OF OUR ANCESTORS REVOLVED AROUND THE RETURN OF EACH RUN. THE CREATOR BLESSED EACH CHANGING SEASON FOR OUR PEOPLE WITH THE RUNS OF CHINOOK, SOCKEYE, COHO AND STEELHEAD. THE RETURN OF EACH FISH RUN WAS WELCOMED WITH CEREMONY, PRAYER, AND CELEBRATION. IT WAS

BECAUSE OF THE CULTURALLY UNIQUE ROLE THAT SALMON HELD THAT EACH TRIBE, BY TREATY, RESERVED TO ITSELF THE RIGHT TO FISH AT ALL "USUAL AND ACCUSTOMED" FISHING PLACES. THESE PLACES ARE SACRED AND ARE NAMED TO COMMEMORATE THEIR SPECIAL PLACE IN INDIAN LIFE. AS PART OF THE TREATIES, CESSIONS OF THESE GREAT LANDS WERE MADE BY THE INDIANS TO THE UNITED STATES. THESE CESSIONS WERE BASED UPON THE PROMISE OF THE UNITED STATES THAT THE TRIBES WOULD ALWAYS RETAIN THEIR FISHING RIGHTS.

OVER THE COURSE OF THE LAST HUNDRED YEARS, MUCH OF THE SALMON RESOURCE HAS BEEN LOST DUE TO HABITAT DESTRUCTION, LACK OF FISH PRODUCTION PROGRAMS, AND OTHER FACTORS. AS MORE PEOPLE MOVED TO THE PACIFIC NORTHWEST, THE SALMON RESOURCE FACED INCREASING PRESSURE FROM THE NON-INDIAN COMMERCIAL FISHERY AND OTHER ACTIVITIES. TRIBES WERE FORCED TO GO TO COURT TO PROTECT THEIR RIGHT TO FISH.

BUT THOSE FIGHTS WERE NOT THE GREATEST OBSTACLES THAT THE TRIBES HAVE FACED. MANY STOCKS OF SALMON WERE IRRETRIEVABLY LOST AS, ONE BY ONE, DAMS WERE BUILT IN THE GREAT COLUMBIA RIVER BASIN, BLOCKING ACCESS TO SALMON SPAWNING GROUNDS FOR HUNDREDS OF MILES. NOW, MORE THAN 30% OF THE SALMON HABITAT HAS BEEN DESTROYED BY DAMS, WITH ADDITIONAL HABITAT DEGRADED BY MINING, TIMBER HARVESTING, POLLUTION AND OTHER ACTIVITIES. THE REMAINING HABITAT IS UNDERUTILIZED BY FISH BECAUSE OF INADEQUATE PASSAGE AT THE DAMS, POOR FLOW, AND INCOMPLETE FISH PRODUCTION PROGRAMS.

SINCE THE FORMATION OF THE COLUMBIA RIVER INTER-TRIBAL FISH COMMISSION IN 1977, GRAVEL-TO-GRAVEL MANAGEMENT HAS BEEN ITS MOST IMPORTANT FISHERY MANAGEMENT POLICY. BY THIS WE MEAN THE PROTECTION OF THE SALMON RESOURCE AT EACH STAGE OF ITS LIFE CYCLE.

BY THE 1970S, MANY PUBLIC AGENCIES IN THE NORTHWEST HAD WRITTEN OFF THE UPPER COLUMBIA RIVER SALMON, IN FAVOR OF HYDROPOWER DEVELOPMENT, IRRIGATION AND OTHER INDUSTRIAL DEVELOPMENT. MUCH OF THE TRIBES' EFFORTS THEREFORE FOCUSED ON HARVEST REGULATION, AND GETTING UPRIVER RUNS RECOGNIZED AS MANAGEMENT PRIORITIES IN HARVEST, PRODUCTION, AND HABITAT ACTIONS. WE ARE HOPEFUL THAT OTHERS NOW SHARE THAT PRIORITY WITH US.

I DO NOT COME HERE TO MOURN THE PAST OR REPEAT THE WELL KNOWN LIST OF WHAT HAS CAUSED THE DECLINES IN THE SALMON. I WANT TO ENSURE THAT THE U.S. GOVERNMENT HONORS ITS PROMISE TO THE TRIBES. FOR THEIR PART, THE TRIBES HAVE SUCCEEDED IN CREATING A COORDINATED HARVEST MANAGEMENT SYSTEM THAT ACCOUNTS FOR FISHERIES HARVEST THROUGHOUT THE RANGE OF THE FISH. THE TRIBES TOOK THE LEAD IN THE PUSH THAT LED TO THE U.S.-CANADA PACIFIC SALMON TREATY. THROUGH LITIGATION, THE TRIBES HAVE SEEN TO IT THAT A MANAGEMENT PLAN IS NOW IN PLACE ON THE COLUMBIA RIVER SO THAT THE INRIVER HARVEST OF SALMON IS CONTROLLED. THESE HARVEST MANAGEMENT REGIMES HAVE PRODUCED A COASTWIDE SYSTEM OF ACCOUNTABILITY FOR HARVEST OF COLUMBIA RIVER FISH. AS PART OF THAT SYSTEM, FISHERY AND FISH RUN INFORMATION IS CONTINUALLY UPDATED AND IMPROVED SO THAT REBUILDING OF CHINOOK IS NOT HINDERED BY HARVEST MANAGEMENT ACTIONS. THE TRIBES ARE COMMITTED TO REGULATING THEIR HARVEST TO SUPPORT REBUILDING. BUT THE FISHERY RESTRICTIONS CANNOT REBUILD THE RUNS ALONE. EVEN IN THE VIRTUAL ABSENCE OF HARVEST, STOCKS SUCH AS SNAKE RIVER COHO, SOCKEYE AND CHINOOK WILL NOT REBUILD TO HEALTHY, PRODUCTIVE LEVELS.

THE TRIBES DO NOT CONTROL THE FLOW OF WATER IN THE RIVERS, OR THE OPERATION OF THE DAMS. NOR HAVE THE TRIBES CONTROLLED THE FISH PRODUCTION DECISIONS. OVER THE PAST 50 YEARS, FISH LOSSES HAVE

BEEN MOST DEVASTATING IN THE UPPER COLUMBIA RIVER BASIN, BUT THE NECESSARY FISH HATCHERIES WERE LOCATED BELOW THE DAMS, IN THE LOWER COLUMBIA RIVER. AS A RESULT, THE WILLAMETTE, AND OTHER DOWNSTREAM RIVERS, HAVE SECURE, PRODUCTIVE FISHERIES AND FISH RUNS. THIS FISH PRODUCTION MANAGEMENT DECISION IS A CONTINUING SOURCE OF OUR FRUSTRATION, ESPECIALLY SINCE THERE ARE MANY, MANY, RIVERS IN THE SNAKE RIVER SYSTEM AND ELSEWHERE, WHICH STILL HAVE HIGH QUALITY FISH HABITAT, BUT NO FISH. THOSE PRODUCTIVE STREAMS REMAIN BARREN OF FISH BECAUSE THE NECESSARY HATCHERY MITIGATION PROGRAMS WERE EITHER NEVER AUTHORIZED BY CONGRESS, OR, THOSE THAT WERE AUTHORIZED WERE INCORRECTLY OPERATED. THE DILEMMA OF TODAY'S "HATCHERY VERSUS WILD FISH" DEBATE IS A DIRECT RESULT OF THOSE FAILURES.

IT IS THE TRIBES' POSITION THAT REPROGRAMMING EXISTING HATCHERIES AND BUILDING NEW ONES ARE SOME OF THE MANAGEMENT TOOLS WHICH WILL BE NEEDED TO RESTORE UPRIVER SALMON. BUT THOSE FACILITIES WILL HAVE TO BE OPERATED SO THAT THEY AUGMENT, NOT REPLACE, THE NATURAL STOCKS. THIS ISSUE OF HATCHERY REFORM HAS BEEN LED BY THE TRIBES, AND HAS RESULTED IN CONSIDERABLE DEBATE BECAUSE OF ITS POLITICAL AS WELL AS BIOLOGICAL IMPLICATIONS. WE ANTICIPATE THAT THIS DEBATE WILL CONTINUE. BUT PRACTICAL, AND BIOLOGICALLY APPROPRIATE SOLUTIONS CAN AND MUST BE IMPLEMENTED WITHOUT FURTHER DELAY. WE HAVE ALREADY WAITED NEARLY 10 YEARS FOR THAT IMPLEMENTATION TO OCCUR. IT IS A SAD COMMENT THAT IN THAT TIMEFRAME, SNAKE RIVER COHO AND SOCKEYE HAVE BEEN ALLOWED TO BECOME FUNCTIONALLY EXTINCT.

IN ADDITION TO HARVEST CONTROLS AND FISH PRODUCTION REFORM, THE WATERS OF THE RIVERS MUST FLOW IN SUFFICIENT QUANTITIES, AND THEY MUST FLOW CLEAR AND CLEAN. THE MAINSTEM DAMS ARE PART OF THE ENVIRONMENT IN WHICH THE SALMON MUST NOW EXIST. BETTER SURVIVAL

OF FISH THROUGH THE MAINSTEM SNAKE AND COLUMBIA RIVERS IS CLEARLY A FUNDAMENTAL PRIORITY.

THE TRIBES HAVE LONG-STANDING RECOMMENDATIONS FOR IMPROVING SALMON SURVIVAL IN THE MAINSTEM COLUMBIA AND SNAKE RIVERS. IN 1981, THE TRIBES SUBMITTED TO THE NORTHWEST POWER PLANNING COUNCIL AN INDEPENDENT MAINSTEM FLOW PROPOSAL THAT WOULD HAVE INCREASED FISH SURVIVAL, PARTICULARLY IN THE SNAKE RIVER. OUR PROPOSAL WAS DESIGNED TO ACCOMPLISH A KEY OBJECTIVE: TO ACCELERATE THE TRAVEL TIME OF JUVENILE SNAKE RIVER FISH TO THE OCEAN, THEREBY IMPROVING THEIR SURVIVAL. THE TRIBAL WATER BUDGET PROPOSAL WAS REJECTED BY THE NPPC IN FAVOR OF A COMPROMISE POSITION. AFTER THE COUNCIL ADOPTED ITS COMPROMISE POSITION, THE TRIBES PETITIONED THE NPPC TO RECONSIDER THAT ACTION. THE NPPC DENIED THE TRIBES' PETITION, BUT STATED THAT THE TRIBAL RECOMMENDATION MERITED FURTHER CONSIDERATION. WE WERE ASKED TO SUPPORT THEIR ACTION ON A TRIAL BASIS. SINCE THAT TIME, EVEN THE FLOWS IN THE NPPC COMPROMISE POSITION HAVE NOT BEEN ACHIEVED. IT IS DIFFICULT TO SUPPORT FURTHER COMPROMISES, GIVEN THE POOR RESULTS OF THE FIRST COMPROMISE AS EVIDENCED BY CONTINUING LOW RETURNS OF CERTAIN STOCKS.

REGARDING THE RELATED ISSUE OF WATER SPILL AT THE HYDROELECTRIC DAMS, THE TRIBES ALSO HAVE A LONG-STANDING POSITION. WATER SPILL IS NECESSARY AT THOSE DAMS WHERE STRUCTURAL BYPASS SYSTEMS ARE NOT PRESENT, OR ARE INEFFECTIVE. UNTIL RECENTLY, THE SPILL HAS NOT BEEN PROVIDED. AND WE ARE STILL TROUBLED BY DELAYS IN BYPASS FACILITY CONSTRUCTION AT THE DALLES AND ICE HARBOR DAMS. HOWEVER, WE ARE GRATIFIED BY THE WORK OF SENATOR HATFIELD, AND OTHERS IN THE DELEGATION, TO SECURE FUNDING FOR BYPASS CONSTRUCTION DESPITE THE CORPS OF ENGINEERS OBJECTIONS.

THE ACTIONS I HAVE BRIEFLY DESCRIBED IN THE AREAS OF FISH PRODUCTION REFORM, FLOWS, HABITAT PROTECTION, AND HARVEST MANAGEMENT ARE THE SAME ACTIONS WE HAVE BEEN SEEKING FOR THE PAST DECADE, AND LONGER. REGARDLESS OF WHETHER ANY FISH IS LISTED UNDER THE ENDANGERED SPECIES ACT, THE TRIBES WILL CONTINUE TO SEEK AND SUPPORT ACTIONS WHICH PROMOTE THE REBUILDING OF EACH OF THE UPRIVER RUNS. THE TOOLS FOR RESTORATION ARE AVAILABLE. IT IS FOR OUR CHILDREN, AND OUR LEGACY THAT WE MUST TAKE THE NECESSARY ACTIONS WITHOUT FURTHER DELAY.

STATEMENT OF LEVI GEORGE, CHAIRMAN, YAKIMA INDIAN NATION FEDERAL COUNCIL

Mr. GEORGE. Good morning Senator Hatfield, Congressman Wyden, Congresswoman Unsoeld. My name is Levi George. I am the chairman of the Yakima Indian Nation Federal Council. In the memories of our elders who understood what the abundant salmon runs in the Columbia River and bountiful harvests means for everyone. Salmon was the beginning of another cycle of life, when great numbers of Indian families would return to their ancestral homes along the Wauna, the Big River as we call it. Everyone would go: women, children, elders, as their families had done since time immemorial.

Yet within a single lifetime, the Wauna's abundance became scarcity. Those bountiful harvests became carefully proportioned and our way of life became dangerously close to extinction. The user tribes feel that—the Indian people hold the white man responsible for this. Dams, irrigation, canals, and restrictive fisheries, forest practices that have destroyed salmon runs have been developed exclusively by non-Indians and usually without conscience or regard for the fishery of Indian people.

You know, the fisher had been a very important person to the Indian people. We shared this. We were giving of our resource. But now we are going to have to work together to bring the resource that we are discussing today.

It has become important for everyone that lives in America. I testified this way before because I have been around and knowing you are not going away from my land; you will be here forever more. Therefore, I know we have to work together to save the resource because we all use it.

We have to have better regulation on the ocean fishery. I believe what their's has to do is screen the 400-mile limit. We have to go to Washington, DC, at the same time. And I called the office and supported our chairman; said, "Go ahead," and we support that. It passed. The understanding we had at the time, there would be restriction on fishery for 200-mile limit.

But I see in the newspaper, TV, there are hardly any restrictions. We have foreign fleets taking our salmon that we are discussing. And I wish and hope that something can be done now. If

we do not control that ocean fishery, we are not going to have any resource left.

Now, as I said about the irrigation, I seen this, see a lot of seagulls out on the field and wondering what were they doing there. Said go check. Thousands of little fish out in the field. They were eaten. You notice when you go by the dams you see the seagulls by the thousands below the dam. They moving down. They come down on them, and they—you know, we found out they eating them.

With this statement our hope that maybe we can work together and doing something about it so we can have better lives in the future with our resource. I see this as important to my Indian people, and now it become important to you too. So we support one another on that issue. Thank you.

Senator HATFIELD. Thank you very much. Your entire statement will be placed in the record.

Mr. Duncan.

STATEMENT OF ANGUS DUNCAN, MEMBER, NORTHWEST POWER PLANNING COUNCIL

Mr. DUNCAN. Senator Hatfield, Congressman Wyden, Congresswoman Unsoeld, my name is Angus Duncan. I am an Oregon member of the Northwest Power Planning Council. I am here today representing the council. I have my statement for the record.

As you know, the council is an interstate compact agency created by the 1980 Northwest Power Act, and the States of Oregon, Washington, Idaho, and Montana are represented on the council.

Among our responsibilities, we are charged with protecting and enhancing fish and wildlife in order to mitigate for damage caused by construction and operation of Columbia River basin hydropower facilities. At the same time we must assure the region an adequate, efficient, economical, and reliable power supply. In short, we have a central and difficult role in balancing fish and power needs for the Columbia River needs system. And finally, the council's directed for participating in most of the activities designed to maintain that balance and to address imbalances where they exist.

These have included water budget, storage, to assist passage of fish up and down the river systems, bypass systems past the dams, hatcheries to supplement the fish runs, restoration of habitat to support both hatchery and naturally spawning fish, subbasin plans for screen-by-screen restoration programs, delineating areas to be protected from hydroelectric development and areas where it can be safely allowed, and research efforts for the protecting of the lives of extraordinary creatures.

This list notwithstanding, Council has limited statutory authority over many other agencies that affect the salmon. We do not operate the dams. We can ask, but we cannot direct the Corps to request appropriations for bypass or other facilities. We rely on cooperation through many other parties.

The record of accomplishment in restoring fish runs in the past 10 years for us and the other players has successes and disappointments. Sometimes steelhead runs are up and heading in the right direction; some are clearly marginal, including but not limited to the runs that are subject to this hearing.

Much has been learned about biology and biological needs of the anadromous species in our basin, but probably the most important and humbling lesson to be learned is we have historically underestimated the classes of these species and the survival needs. What works in one circumstance cannot necessarily be replicated in another circumstance with other species or subspecies. There is no single fix, no easy answer, no magic bolt for repair of the imposition human activities have made on patterns of life that evolved over millions of years.

We learned about hatcheries and all their numbers, but that protecting remaining naturally spawning stocks includes habitat, flow, water temperatures, timing, harvest, myriad of other conditions that 150 years of human actions have altered. We have all learned these and other lessons together in the 10 years since we began giving serious attention to the recovery of the fish runs.

We have made mistakes, had false starts, had disappointments. But now I think there is no point now in naming names and pointing fingers. Once we start, very few of us are going to escape attention entirely.

Instead, the agencies and resources of the council need to be focused on recovery of our stocks and accomplishing the goal in a manner least disruptive and costly. We have other pressing needs out here. We cannot afford to be spending our emotional and political energies unproductively in confrontation and directions that will lead to actions not in the river's interests.

The region now needs first to support the National Marine Fisheries Service and its process to determine, on the best science available, whether we have a species endangered according to the terms of that act. We need to establish for these and other stocks a realistic, liveable, forcible recovery program whether or not all these things merit.

The first elements of this program, I believe, can be, as the Senator described, by the October 1 date which is set, and we on the council plan to respond by that date.

But long term, I caution, that such a program will not be simply devised or implemented; it will not be cheap; it will not be accomplished in 1 year or 2 or 5 or 10. This program requires the cooperation of all the managers and users of the river system. This is not a power versus fish question. It is not a power versus irrigation question or environmental versus power. It is a question of recovery of the stocks.

In the event National Marine Fisheries Service should establish sufficient evidence to merit one or more listings—and I do not believe the council or any other parties prejudge that question. In that event, such a recovery program, together with the enforceable commitment of all parties, might be judged sufficient grounds for listing. The object of such programs, however, is to preserve species, not to avoid a listing.

The council's activities is to achieve a necessary part in stepup for the Columbia in behalf of these stocks' repair, start building a role with other agencies and interests. In response to your proposal, we are prepared to do more to serve the what is needed, assess their resources, respect top issues. For all we know, the States can

interact in a better way than the one devised, and we are prepared to help any way we can. Thank you.

[The statement follows:]

STATEMENT OF ANGUS DUNCAN

Good morning. My name is Angus Duncan. I am an Oregon member of the Northwest Power Planning Council, and I am here today representing the Council. As you know, the Council is an interstate compact agency created by the 1980 Northwest Power Act and the states of Washington, Oregon, Idaho and Montana.

The Council is charged with protecting and enhancing fish and wildlife in order to mitigate for damage caused by construction and operation of Columbia River Basin hydropower facilities. We are directed by Congress to pursue this mission while assuring the region an adequate, efficient, economical and reliable power supply. In short, we have a central and difficult role in balancing fish and power needs in the Columbia River system.

The Council is currently updating its regional power plan to address a need for new conservation and generating resources. In addition, the Council is nearing the end of an extensive basinwide salmon and steelhead planning effort that will identify future production levels for all stocks in the Columbia River Basin.

We are pleased to have this opportunity to testify before you. We appreciate the fact that the petitions recently filed under the Endangered Species Act will require careful consideration of a number of complex and controversial issues. This is a multi-faceted problem which involves power system operations, harvest regimes, water storage and flows, fisheries management, and potential conflicts among other water users such as irrigation, navigation and recreation interests. We believe that, as a body, the Council should not prejudge whether the National Marine Fisheries Service ultimately will decide to list species as threatened or endangered. We intend to monitor carefully the National Marine Fisheries Service deliberations under the Endangered Species Act. Rollie Schmitten, the regional director, has a difficult job to do, and we will help in this process. We believe it is essential that his deliberations be based on the best scientific information available, and we are confident that he intends to do so. We understand he will involve a broad range of technical experts as advisors to ensure that the scientific basis for his decisions is solid.

The Council is fully committed to avoiding the extinction of salmon and steelhead, and we believe the Council can play a constructive role in the Endangered Species Act process.

I would like to discuss with you several Council activities that are relevant to your oversight of the Endangered Species Act process. At the beginning of the decade, the basin's annual salmon and steelhead runs were at an all-time low, an estimated 15 percent of the run size a century before. In the mid-1980s, salmon and steelhead runs improved -- thanks in major part to a treaty between the United States and Canada to limit ocean salmon harvests. While last year's runs were down, the trend seems to point to improved runs for some salmon. Major efforts to complement treaty achievements have been put in place through the Council's fish and wildlife program.

Since 1982, the Council has launched three major fish and wildlife programs, with each subsequent edition adding measures designed to improve survival or increase production of fish and wildlife. Many of these measures have been implemented during the last decade. These include a water budget released during the spring migration to help juvenile fish migrate to the sea, an historic 10-year agreement signed last year to spill water to secure safe

fish passage over the dams, additional work on fish bypass systems at a number of dams, hatcheries, habitat restoration, and research projects. The Council also has designated 44,000 miles of Northwest streams as areas to be protected from hydropower development because of their important fish or wildlife habitat.

As the decade ends, the Council is at work on another major new component of the fish and wildlife program. We are now developing a systemwide plan for the 31 major subbasins that make up the Columbia Basin. The objective of this plan is to produce an integrated program and determine whether we can increase salmon and steelhead runs in a biologically sound manner.

MAINSTEM SURVIVAL

As we have discussed with the Congressional delegation in the past, one of our priorities is to improve mainstem passage and survival in the Columbia River system as soon as possible. For the past nine years, the Council has emphasized the importance of improved passage at and between hydroelectric dams in the mainstem Columbia and Snake rivers. The Council's current program works to improve juvenile fish survival in the mainstem of the Columbia and Snake rivers in four ways: 1) screens to deflect young fish from turbine intakes, and bypass channels to route fish safely past dams are called for at all mainstem dams; 2) until these are in place and operational, a portion of the fish are passed over dams through spillways; 3) a water budget has been instituted to increase flows between dams during the April 15 through June 15 migration or when the majority of spring migrants are moving downstream; and 4) certain stocks are collected at upriver dams and transported downstream in barges and trucks to be released below Bonneville Dam.

Bypass Facilities

In 1990, the Pacific Northwest obtained a new ally in its attempts to improve salmon and steelhead survival in the mainstem of the Columbia. Funding for bypass improvements -- channels through dams and underwater screens to divert fish from turbines -- was incorporated into the president's budget for the first time in many years. Generally speaking, once installed, these bypass systems are expected to cut in half the number of fish killed at each dam. In an unscreened system, where fish may pass as many as nine dams before reaching the sea, more than three-quarters of the young migrants can be killed in the turbines.

Some of the major dams still have no screens or bypass channels. Others have systems that could and should be upgraded. Bonneville, John Day, McNary, Little Goose and Lower Granite dams all have bypass systems or are in the process of developing or improving their systems. Lower Monumental, Ice Harbor and The Dalles dams are unscreened. On the Mid-Columbia, Wells Dam has a unique design that enables fish to pass safely, and operators at Priest Rapids, Wanapum, Rocky Reach and Rock Island dams are all in the process of developing and testing prototype screening and bypass systems at their projects.

Protecting young salmon and steelhead as they migrate from their upriver spawning grounds to the sea is the Council's number one fish-related priority. Gaining support from the federal budgetary process this year has been a tremendous boost to the salmon recovery effort in the region. However, the $14.8 million allocated in the administration's 1991 budget to bypass facilities only covers Lower Granite, Little Goose, Lower Monumental and McNary dams. Work at Ice Harbor and The Dalles dams is not included in that budget.

We deeply appreciate the substantial support from you, Senator Hatfield, and other members of our Congressional delegation in expediting the installation and upgrading of these facilities. Without that support, historical opposition of the U.S. Army Corps of Engineers and the Federal Office of Management and Budget could have delayed these facilities well into the next century.

We are seeking additional funds in 1991 to expedite screening projects at Ice Harbor and The Dalles dams. At these two projects, the Corps of Engineers has argued that installation of bypass screens is not economically justified. The Council has urged consistently that properly conducted economic analysis, coupled with the national and international importance of salmon and steelhead runs in the Columbia River system, argues strongly for the early installation of these facilities. It is our fervent hope that mechanical bypass facilities can be completed at these projects in the mid-1990s. This will improve the survival of migrating fish. In addition, effectively operating screens also will permit the region to eliminate spill and associated lost power system revenues each year.

Spill Plan

Until permanent bypass systems are in place and functioning properly at all mainstem dams in the path of migrating fish, the Council has called on project operators to spill water to carry fish away from dam turbines. Because the fish-laden water is dumped over the dams rather than run through turbines to generate electricity, spills are costly in terms of lost power revenues. Depending on power prices and customer demand, spilling water costs the Northwest approximately $15 million each year. (Total fish and wildlife program costs run about $100 million each year.) Consequently, the Council and other fishery interests in the region are pushing the Corps of Engineers to hasten plans to add permanent fish passage improvements for all the dams.

In 1989, after 18 months of negotiations, a long-term spill plan was developed by state and federal fish and wildlife agencies, basin Indian tribes, utilities, the Bonneville Power Administration and the Council. It calls for specific spill levels to carry juvenile fish to the sea past Lower Monumental, Ice Harbor, John Day and The Dalles dams -- all operated by the U.S. Army Corps of Engineers. The Corps has only agreed to comply with the spill agreement on a year-to-year basis. In 1989 and 1990, the spill agreement was implemented.

Water Budget

The third aspect of the fish and wildlife program's mainstem passage strategy is the water budget -- a specific amount of water that is made up of natural runoff and releases from upriver dams on the Columbia and Snake rivers to help fish move rapidly through the system. The water budget is essential, because fish undergo an adaptation from freshwater to saltwater environments. They must be in saltwater by the time their bodies have completed this transformation.

In the past, spring runoff has been held in the dams so it may be used for power generation later in the year. With the water budget, part of the spring runoff is released when the majority of the fish are migrating out of the basin. This speeds the fish through the system, helping them make the trip in the correct amount of time and protecting them from long delays that also expose them to predators, warmer water and diseases.

The water budget on the Columbia River has not been controversial in recent years. The mainstem Columbia has substantial storage in Grand

Coulee and other headwater reservoirs which enables us to provide the full water budget. However, the water budget on the Snake River is made up largely from natural flows. In recent low-flow years, adequate water for fish has not always been available.

In the Snake River, we can store only about one-third of the water budget flows. The remaining two-thirds depends upon snowpack, precipitation and runoff. We have been forced to rely on the weather for much of the flow in the Snake River.

The Council's program calls for federal project operators to evaluate the feasibility of improving water budget flows by modifying flood control requirements, constructing new reservoirs, and using uncontracted storage water. More work needs to be done by the federal agencies in this area to evaluate all options for improving water flows in the Snake River.

The Council is ready to consider proposals to improve passage survival in the Snake River leg of the system. The flow proposal developed by the Columbia Basin Fish and Wildlife Authority focuses particular attention on the Snake River. The Council has urged the Authority to provide more specific documentation of the biological benefits expected from the proposed increased flows. We will forward a copy of these materials to you as soon as we receive them.

Transportation

The fourth aspect of the fish and wildlife program's effort to improve fish survival during downstream migrations is the Corps' fish transportation program. In 1989, the Corps completed work on two new barges, to bring its fish transport fleet to six. Funds added by Congress in prior years were crucial to obtaining these barges. With the new barges and improved fish handling facilities, the Corps this year expects to transport a record number of young steelhead and chinook from the upper reaches of the Snake and Columbia rivers to be released below Bonneville Dam.

PRODUCING MORE FISH

The Council's program supports a three-part approach to producing more salmon and steelhead through a combination of natural production, hatchery production, and supplementation of wild and natural fish produced by releasing hatchery fish into natural habitats. To advance this effort, the Council has adopted measures to provide water flows and temperatures suitable for natural and wild propagation, improve habitat and tributary passage, increase knowledge of appropriate timing and sites for release of hatchery fish, improve existing artificial production facilities, and build new hatcheries, mostly as outplanting facilities.

Bonneville funds have completed some 30 sets of projects to improve tributary passage and repair habitat for salmon and steelhead in the Clearwater, Deschutes, Grande Ronde, John Day, Salmon, Umatilla, Wenatchee, Willamette and Yakima River subbasins. There are more than 80 other projects to improve natural and wild production of salmon and steelhead. More than 2,000 miles of streams have been improved for salmon and steelhead. Typically, these projects involve fencing and replanting streambanks and restoring structure in the streams to provide cover, rearing areas and other essential elements of habitat. Another 1,000 miles of habitat have been opened to fish production by improving passage at or removing barriers.

SYSTEM PLANNING

As I mentioned earlier, the region is currently involved in a process to identify additional ways to increase salmon and steelhead runs basinwide. This will be the first detailed basinwide plan for the Columbia River. It was initiated in 1987 and is scheduled for completion in 1991. As a planning target, we have been driven by an aim to increase the runs of salmon and steelhead in the basin by some 2.5 million additional fish, approximately doubling current runs. However, we are not simply seeking to increase the numbers of fish. The Council is convinced of the need to conserve genetic resources of the naturally producing and hatchery salmon and steelhead in the Columbia River Basin.

The historical salmon and steelhead losses experienced in the Columbia River Basin cannot be described simply as a sizeable loss in the number of fish produced in this river system. We also lost an enormous amount of genetic diversity, including entire runs of fish that spawned primarily in the upper reaches of the river system. Prior to 1850, when the Columbia River system was home to some 10 to 16 million returning adult salmon and steelhead each year, these fish were 100% wild spawners. At the present time, with fish runs reduced to some 2.5 million fish, nearly 80% of the runs are produced in hatcheries. Considerably fewer than one million fish are spawning naturally.

To protect naturally spawning populations, we have called on the Columbia River Basin fishery managers (who are preparing our proposed salmon and steelhead plan under contract) to identify clearly the salmon and steelhead stocks which, in their opinion, should be addressed as the highest priority. We have asked that two types of priorities be identified: 1) stocks that are marginal and need immediate help and 2) stocks that have the potential to increase significantly and add to the population of fish in the basin. We believe the marginal stocks are of critical importance and should be addressed on an expedited schedule.

We are scheduled to receive the agencies and tribes' final Columbia Basin system plan by the end of the year. A draft will be available this summer. Existing data on Columbia River salmon and steelhead runs have been assembled and analyzed over the last two years, and the status of these runs and trends in their productivity are now being determined. We anticipate that this information will be used by the National Marine Fisheries Service in its status review under the Endangered Species Act.

With this information in hand, the Council is committed to move quickly to address marginal stocks. It is important to note that any Council actions in this area would not be intended to prejudge the outcome of the deliberations under the Endangered Species Act. They would be a continuation of the Council's current effort to help high priority fish stocks and habitat. In addition, any early implementation activities under our system plan will be designed so that they will not undermine a coordinated basinwide approach to salmon and steelhead recovery.

Willamette River and Salmon River Actions

In recent months, the Council has taken two actions to address areas of the basin where specific stocks appear to need high priority attention. First, while we are encouraged that the Willamette River Basin spring chinook run is returning in large numbers and supports a highly visible fishery in the

spring of the year, we also are aware that the naturally spawning component of this run is quite small and is primarily found in the McKenzie and Santiam tributaries to the Willamette system. Federal dams on those tributaries have altered river temperatures in a way that delays adult chinook migration in the spring and accelerates juvenile salmon emergence and migration in the early winter. These temperature changes reduce the survival levels of these important stocks. As a result, we have urged the U.S. Army Corps of Engineers to conclude expeditiously its temperature control studies in those basins and proceed as soon as practicable with the installation of temperature control devices at Blue River and Cougar dams in the McKenzie system and Detroit Dam in the Santiam. We have urged that additional funds be provided in fiscal years 1991 and 1992 to expedite the conclusion of the studies and necessary design work. We have appreciated very much Senator Hatfield's assistance in the effort to include these funds in the 1991 appropriations for the Corps of Engineers. Protection of these valuable naturally spawning fish will help ensure that the Willamette River chinook run is sustainable over the long term. I cite this as an example of the kind of activity we hope to pursue basinwide as the system plan is reviewed.

More recently, the Council has reviewed early drafts of the Salmon River subbasin plan being prepared under our comprehensive system planning effort. That plan suggested a couple of ways that the beleaguered Salmon River sockeye run might be rehabilitated. One involves the use of indigenous, landlocked kokanee in the upper Salmon to rebuild the migrating sockeye run. A second alternative, one that would be pursued only if the first could not be implemented, would involve the reintroduction of sockeye stock from elsewhere. The Council has corresponded with the Idaho Department of Fish and Game, the Shoshone-Bannock Tribes and the Nez Perce Tribe urging that they expedite their review of these alternatives. The Council has indicated a willingness to consider them for amendment into the fish and wildlife program if they are found feasible and prudent to implement. The Council and other parties have expressed an interest in developing other early implementation activities as needed to address critical stocks in the basin. Once again, I must emphasize that these actions are not taken to prejudge the outcome of Endangered Species Act deliberations; they are part of our planning process started over two years ago with the intention of identifying marginal stocks and the actions to protect and rebuild them.

CONCLUSION

The region, working together and with the help of Congress, has accomplished much in the last nine years, but obviously, more remains to be done. We have established a "water budget" which increases flows each spring during downstream fish migration. We have developed a spill program at the dams to aid fish migration until bypass screens are installed. We have pushed hard for installation of new and improved screens and bypass facilities at the federal dams. We established protected areas to ban hydro development in critical fish habitat. We have invested substantially in fish habitat protection and restoration projects throughout the basin. We now are speeding measures on marginal stocks through the system planning process.

The endangered species issue, however, cannot be adequately addressed by the region in a comprehensive manner solely through the Council's Fish and Wildlife Program. Any comprehensive approach must include all the divergent interests in the basin, all the managers and users of the Columbia River system. The fishery managers, the irrigators, the waterway and recreation interests, the harvest regulators, the utilities, the dam and reservoir operators, and others must all take part in any effort to address this issue in a thorough way.

The Council is ready to assist in any way we can to address the salmon and steelhead issues we face in the Columbia River Basin. We look forward to working with you, the other members of our Congressional delegation and those in the region in resolving these significant concerns. Thank you for the opportunity to testify, and I will be happy to answer any questions you might have.

Senator HATFIELD. Thank you very much, Mr. Duncan. You have responded positively. Congresswoman Unsoeld has an engagement in the State of Washington this afternoon. I call on her first with the consent of Congressman Wyden.

Ms. UNSOELD. Thank you very much, Senator Hatfield. What percentage—whoever feels the most eager to jump in and answer. What percentage of the downstream migrating smolt actually survive the trip through the unscreened dams? Want to take a crack at that?

General STEVENS. Congresswoman Unsoeld, your question does not have an easy answer. The migrating juveniles going downstream have different survival percentages as they pass through the system of eight dams. There is an additional consideration which is the percentage of diverted migrating juveniles. If you add all of those factors together, I am not sure exactly our total—if you took all of the migrating juveniles and put them in a system and pass them through the entire system, you would probably lose 80 to 90 percent. It does not work that way. In fact, most of the migrating juvenile are collected and barged. They never pass the unscreened dams. The estimated percentage last year by using the existing bypass system and transportation is 25 to 35 percent.

Ms. UNSOELD. Please provide the following information for the record. Indicate the survival of various fish stocks through the Snake and Columbia River dams. Identify when we expect to have fish passage facilities installed on all Federal dams in the Northwest. Identify what fish passage facilities are installed or used at non-Federal projects on the mainstem Columbia and Snake Rivers.

General STEVENS. I will supply that information for the record.

[The information follows:]

The survival of smolts migrating downstream to the ocean depends on many factors and varies widely. The most important factors influencing survival include: the species on race of salmon, the number of dams and reservoirs the fish must pass, and whether the fish are wild or from hatcheries.

Smolt mortality ranges from 4 to 10 percent at each dam, depending on its bypass facilities and spill. In addition, mortality in each reservoir ranges from 5 to 25 percent. If the Corps of Engineers did not transport fish from dams with bypass facilities, only about 12 to 30 percent of the fish originating in Idaho would survive to below Bonneville Dam.

By using fish barges at Lower Granite and Little Goose dams on the Snake River and at McNary Dam on the Mainstem Columbia River, to transport fish to below Bonneville Dam, the Corps of Engineers greatly reduces mortality since the Snake River fish avoid the cumulative hazards associated with reservoirs, predators, and obstructions at all of the downstream dams. With current bypass and transport operations, the average survival of spring and summer chinook from Idaho is about 80 percent to below Bonneville Dam. This figure indicates why transportation is a crucial element of juvenile fish bypass facilities.

Ms. UNSOELD. In this year's water appropriations bill in the House, there is $17.5 million included for juvenile fisheries mitigation on Federal dams. With this money, the screening project for The Dalles Dam should continue. When do you expect fish screens on all Federal dams?

General STEVENS. Madam, we have at present, a commitment for installing up to 96 fish bypass screens. That is moving forward on schedule that we have projected for completion in 1996.

Now, separate from that is the issue of adding an additional 84 screens at Ice Harbor and The Dalles dams. We are engaged in de-

signing of those facilities now. Those moneys were not budgeted but were appropriated by Congress, and should further moneys be added, we will continue that design process.

[The information follows:]

The following table indicates when bypass and transportation facilities were installed or will be installed, and when improvements are scheduled.

Federal facility	Bypass installed	Improvement scheduled
Lower Granite [1]	1981	1995
Little Goose [1]	1980	1995
Lower Monumental [1]	1991	1993 (trans.)
Ice Harbor [2]	Not scheduled	
McNary [1]	1981	1995
John Day	1987	
The Dalles [2]	Not scheduled	
Bonneville	1982/1983	

[1] These projects also have transportation facilities.
[2] These projects also have ice and trash sluiceways to divert fish from the turbines.

Ms. UNSOELD. How many of the non-Federal dams have adequate fish bypass or screens and what is the schedule for these? That might go to—anybody have any notion on that or familiarity with it?

Mr. DUNCAN. I think Congresswoman we could come up with a rough approximation, but I would just as soon not do it right now.

Ms. UNSOELD. If it is not too inconvenient, I would very much appreciate having that kind of information, because if we need at the congressional level, trying to implement some other actions that are going to help prevent later mitigation for the problems that may be facing us in regards to the study that has been talked about today, I think we should get onto it so we do not face a crisis later and say, why didn't we do all these things at a time when we could?

Mr. DUNCAN. We have a long shopping list. We will send it to you.

Ms. UNSOELD. That is a deal.

[The information follows:]

At Corps of Engineers' dams presently without bypass facilities (lower Monumental, Ice Harbor, and The Dalles), BPA has worked to improve survival through spilling water so fish avoid passing through turbines. We expect to stop spilling once permanent bypass facilities are installed. Fish survival at Ice Harbor and The Dalles is further improved by using ice and trash sluiceways which pass 40 to 50 percent of the fish around the turbines.

There are no fish bypass facilities at non-Federal projects on the Snake River. Of the five non-Federal dams on the mid-Columbia River, only one dam, Wells, has an operating bypass system. This system relies on a unique spillway design approved by the fishery agencies and Indian tribes. The other dams, Rocky Reach, Rock Island, Wanapum, and Priest Rapids are providing interim spill to improve fish survival pending resolution of fish bypass issues and testing of prototype screens.

Ms. UNSOELD. Thank you very much, Senator Hatfield.

Senator HATFIELD. Congressman Wyden.

Mr. WYDEN. Thank you very much, Senator. I have a question for you, Mr. Strong and Mr. Jura, and I think you can answer it. One of the things that I have been concerned about policy in this general area is we have set these quotas and anxious to get fish production up, and I have been concerned that it is not clear

whether there is a real breakout in terms of trying to get target on increasing natural stocks as well as increasing hatchery stocks. Now, maybe this is just a question of reading these materials differently.

My question to you is, Do we now as a Federal policy have a target or quota for both types of fish, hatchery and as natural stock?

Mr. JURA. In answer to your question, Congressman, I would like to refer to the process by which the region arrives at to determine where the investments go. The Regional Act required all of the people that are appearing before you today to come together and address this very issue. Where do we want the investments to be? Where should the emphasis be? The regional council's plan provides guidance to the Bonneville Power Administration which expends the funds.

That is what we have been doing, and I think we have worked well together. I think the cooperation in arriving at that plan has steadily improved through the years. The Bonneville Power Administration has fully implemented the council's plan. The situation we are discussing here is raising some questions as to whether it has been correct, and whether or not more emphasis needs to go in other areas.

Mr. WYDEN. Do we have specific target or quota today for both hatchery fish and natural stock?

Mr. JURA. BPA has not established specific numbers for each of those that I am aware of.

Mr. DUNCAN. I think the answer is, at least the council has adopted an overall goal of doubling fish runs in the Columbia River. That is not broken down to natural spawning and hatchery fish.

I think it is also fair to say that, and I mentioned this earlier, that over the last 10 or 20 years the body of thinking among fishery management officials has shifted from the notion that this could entirely be addressed with hatchery programs to the notion that there were some very distinct species and subspecies that were naturally spawning and not only not respond to hatchery support but in some circumstances directly competed with hatchery fish to their own detriment.

It is sort of a roundabout answer, but it is more accurate to say the emphasis has now shifted to where we are not trying to advantage one or the other; we are trying to go virtually stream by stream and subbasin by subbasin to try to support both those kinds of fish and to ensure that neither will conflict with the other. We have had some success so far.

Mr. WYDEN. Well, do either of you—or any of the other panel members can feel free to come on in—think that given the crunch we are in now we ought to specifically set targets for both? What we have done in the past, we have had a general target and the river kept producing hatchery fish and natural stocks kept climbing. Should we, in the future, think about a specific target for each so that we really kind of lock in our policies of saying specifically because we think it is necessary?

Mr. JURA. Well, I think what we are talking about today in Senator Hatfield's proposal, as the Senator in his opening remarks said,

will result in activities that will put us right in that direction, going toward that objective. I am not sure that that is desirable or appropriate to make specific targets for each of these stocks. What you are trying to get to, I think, is going to occur. The fact that we are in a situation has certainly brought emphasis to the need for that.

Mr. DUNCAN. I think characterizing it as a target might be a little more than is appropriate. I think what we need to do and are in the process of doing is identifying the species or subspecies that are important to us, saying what does the size of that run have to be to be self-sustaining? If that is what you mean by setting a target then, yes, we are setting those targets—are in the process of setting those targets for each species and subspecies of fish by subbasin.

Mr. WYDEN. Well, it certainly sounds that what you are talking about is moving in the same direction. I am just concerned that in the past we have always—at least from all the material I have read, we look at the general numbers; we say the general numbers are going up. The hatchery fish keep increasing, and the natural stocks do not.

Unless we come up with some type of system to really push ourselves—and that is the way I would characterize it—I would say some people, not you all, will become complacent about it, saying fish production is up and not look at where it is coming from, and we will continue to have these problems.

Let me ask you, if you would, to explain the $1 billion that is being used by Bonneville to be used by fisheries. What I understand is these are incurred costs which were caught once and the hatcheries have contacted and researched the level of the run as well as water spilled for fish migration without generating power and opportunity costs of the spill. Could you break down that $1 billion? And specifically what I am interested in knowing is whether spill costs represent a very large portion.

Mr. JURA. Yes, sir; the $1 billion that has been referred to is an expression of total investment we have made or are planning to make now and in the near future. It goes through fiscal year 1991.

If you were to break it down in rough numbers, approximately 40 percent, about $400 million, is a result of what we would call foregone revenues. Approximately 20 percent, $200 million, and keep in mind this is since 1980, the activities under the Regional Act, about $200 million, 20 percent, have been directed to specific actions such as hatcheries and improving habitat. The remaining 40 percent has been reimbursing the Corps of Engineers and the Bureau of Reclamation for their fishery activities.

Mr. WYDEN. I want to go through some figures to compare the costs of fish, and just for the sake of comparison, what is the cost incurred to the ratepayer in lost power because of other uses of the river, such as, say, irrigation, transportation?

Mr. JURA. I have a rough number on irrigation. I asked that question in preparation for the hearing. A reasonable assumption could be in the neighborhood of $200 to $300 million a year. We have not spent a lot of time developing that number, but a very rough estimate is that between $200 and $300 million a year would be associated with irrigation.

Mr. WYDEN. Is more water lost to fish or other uses, based, you know, on your calculations?

Mr. JURA. Well, irrigation would be a bigger use, larger use than the foregone revenues for fish.

Mr. WYDEN. Because, you know, some have suggested to our office that other uses deprive the ratepayer tens of times more power than fish do. The question then becomes, are we—not using a double standard but are we using a fair standard to counter cost against fish that are not counted against other uses?

Mr. JURA. Congressman, you have put your finger on the very issue that the Corps of Engineers, Bureau of Reclamation, Bonneville, and all of the other parties here that are addressing in the system operations review that was mentioned earlier. The competing uses on the river system are very real and are very difficult. They involve how each Federal agency operates under its enabling legislation. They involve agreeing on how we all will work together to operate under directions received from the Congress. The system operations review will go into many things. So it is very much a real issue.

Mr. WYDEN. Now, there is general consensus that increasing the flow on the river during downstream migration would help in the upstream stops. What steps is Bonneville prepared to take now to increase the upstream flow?

Mr. JURA. I would not say that Bonneville agrees that there is consensus on that statement. Through the regional council's water budget and through the spill agreement that the interested parties in the region got together and signed last year, we have devoted a sizable amount of water and have supported operating the projects to improve conditions for fish. To go beyond that is an area that we are advising some caution on.

I very much appreciate your remarks, Congressman, on how we approach these issues and not throw money at issues. Our position is that we have a very good understanding of the cost of additional flows, but at this point we do not have a good understanding of the value to fish, how much benefit will go to actually improving survival. There is, in our view, some dispute in the scientific community on that.

[The information follows:]

BPA believes the problems with juvenile fish migration should be addressed on a comprehensive, systemwide basis. Several measures are available for improving juvenile fish migration, including bypass systems, flows, spill, transportation, and squawfish management to reduce predation. BPA addresses the juvenile fish migration on the basis of how to provide needed increases in juvenile fish survival at a minimum cost. The focus then is not just on how much water can be provided, but what combination of measures, including streamflows, can be implemented to provide the most effective increases in fish survival.

With the Fish and Wildlife Program, fish passage survival has been improved through the addition and improvement of fish bypass systems, fish spills, the Water Budget, and increased fish transportation. Fish survival will continue to increase significantly with the installation of bypass and transportation facilities at Lower Monumental Dam and planned bypass improvements at three other Corps of Engineers' dams. Also, squawfish management will be expanded to improve survival through the reservoirs. All of these improvements, which have already been scheduled, will provide further increases in fish survival.

Through an agreement with fishery agencies and tribes, BPA anticipates acquiring more water in the Snake River to stimulate fish migration through the uppermost reservoirs. However, we believe the region lacks scientific information which

links increased flows to increases in fish survival. This information should be developed before the region pursues significant flow changes in the basin. Given the lack of information about the effectiveness of flows, it is too risky to undertake significant alterations in the operation of the hydrosystem until we have also undertaken a review of the other tools available to improve juvenile fish survival for the fish populations of concern.

Mr. WYDEN. I also share your view. This is not a precisely fleshed-out scientific process. But I have not seen anything to indicate we are not going to have to increase flows. Isn't Bonneville planning at this point to improve flows?

Mr. JURA. Well, we have been improving flows through the things I have mentioned. The spill agreement resulted in us providing spill at each of those facilities where we do not have proper screening; and the understanding is once the screening is provided, then we will stop the spill.

But to go beyond where we are now, we believe there are serious questions as to the benefit. It is an honest debate. We need more discussion and we need better scientific information as to the value of that.

Mr. WYDEN. Just a couple of others. In regard to the treaty with Canada that you are negotiating, are you arranging for any water to go back to the fish?

Mr. JURA. Sir, we have done an extensive amount of discussion on this issue associated with the treaty with Canada, and I am pleased the report here today that just yesterday we have signed the agreement with Federal and State agencies who are part of the Columbia Basin Fish and Wildlife Authority that overlies the non-treaty storage agreement. This overlying agreement assures that fish are held harmless and, in the case of the Snake River, actually benefited as a result of that agreement.

So this is a perfect example, I believe, of how you are seeing this region come together to address these issues. It was a very difficult negotiation, but thanks to a cooperative effort on the part of all these parties, we were able to sign an agreement.

Mr. WYDEN. That sounds like progress. I was concerned that the earlier version of the agreement did not do justice to some of the problems of our fish. And you are saying, I guess, the amendment signed yesterday would favor fish more than the other would.

Mr. JURA. The agreement issue was, what does the agreement do to the fishery resources? We conducted an environmental study of that issue under our NEPA obligation and we determined that there were no adverse impact to fish.

We then went to the interested fish interests and discussed that with them and signed an agreement that pledges us to hold the fish harmless, and as I said there are provisions in the overlying agreement we signed that will actually benefit the fish on the Snake River.

Mr. WYDEN. One last question. Power Planning Council's fish and wildlife program calls for a coordinated information system, data bases, on natural and hatchery stock stats. Now, this seems to me to be just about as relevant as anything else to the kind of issues that we are talking about today. I am told the BPA has never funded this part of the council's program. Is that correct? If so, why not? Are we going to make a change in that area?

Mr. JURA. Let me tell you where we are on that particular program. First of all, it is in the council's program and we fully support it. It is an extensive, expensive, complicated undertaking, but it needs to be done. That is the first thing and we have got agreement on that.

The initial stage, for just planning and design, will cost us in the neighborhood of $2.7 to $3 million, so significant dollars are involved. We are at the stage now where we are attempting to make sure that the system is designed properly. And I am aware—it has been brought to my attention there is concern we might not be moving quickly enough on this, and we are looking at our resources to make sure we are directing enough attention to this to move along as quickly as possible.

Mr. WYDEN. But Bonneville has never funded this part of the program?

Mr. JURA. We are committed to fund it, but have not directed any funds to it yet.

Mr. WYDEN. When do you anticipate directing funds?

Mr. JURA. I cannot commit to that right now, but I can get back to you on that.

[The information follows:]

Since being included as part of the 1987 Columbia River Basin Fish and Wildlife Program, the Coordinated Information System [CIS] has been a topic of extensive discussion among the Northwest Power Planning Council, state fish and wildlife agencies, Indian tribes, Northwest utilities, and BPA. We are committed to supporting the CIS. We believe the benefits of this system will enhance our ability to meet our Fish and Wildlife Program objectives.

The state fish and wildlife agencies and tribes have provided us with a draft project description for the CIS. Following our review of the proposal, we expressed several concerns with the project as proposed. Specifically, we were concerned about the ambiguity of project deliverables, the levels of effort, task sequencing, expertise required, and total projected costs. In view of the importance of this project to the Fish and Wildlife Program, we believe it is necessary to resolve these concerns before proceeding and we have been working with state agencies and tribes to resolve these issues and to obligate fiscal year 1990 funds by the end of this fiscal year. But, until these issues are resolved, we cannot anticipate what funding levels will be necessary.

Mr. WYDEN. Can you give us a minimum figure you would commit to now? You said this was an expensive program. My reason I press you is it seems directly relevant. These are the questions John Dingle, I assure you, will ask as we go, because that will allow us to get the data bases on the natural stocks.

Mr. JURA. Until we know how the money is going to be spent and whether or not it will be spent to good purpose, I am reluctant to send any money out. We are going to undertake the effort and we are going to fund it.

Mr. WYDEN. You are willing to fund a substantial part of the program?

Mr. JURA. Oh, yes.

Mr. WYDEN. Thank you, Mr. Chairman.

Ms. UNSOELD. Thank you, Senator Hatfield. I wanted to explore a bit who has the authority, other than FERC in requiring fish screens or some other mitigating technology on non-Federal dams? Does the council have any authority there?

Mr. DUNCAN. My own council is in a city close by, as soon as I stray, you will know it. My understanding is that first we look at

proposed dams and see if that is in the protected areas process; and then we also look at those dams with respect to their fish and wildlife process, and then we offer comments to FERC, and they generally take those comments into consideration.

Ms. UNSOELD. I agree that—was it true that you were considering some kind of bounty for squaw fish?

Mr. DUNCAN. One of the more ironic features to this whole process is that squaw fish is a terrible predation problem in the dams here, but if you go down to the Colorado River you find there is an endangered species process on the squaw fish. This describes how complicated managing our relationship with our environment becomes.

Yes; we are contemplating bounty on squaw fish. We are contemplating a squaw fish derby.

Ms. UNSOELD. I commend you. Do you have any data on what the squaw fish takes might be as compared to the lack of screens?

Mr. DUNCAN. I would refer that question to—the relationship between squaw fish takes to the—I assume you mean bypass screens?

Ms. UNSOELD. Yes.

Mr. DUNCAN. Which is killing more fish?

Mr. FISHER. Squaw fish is estimated to account for 45 percent losses in some areas moving through the pool in the summer period. It does not seem to be as big an issue in the spring in cold water.

Ms. UNSOELD. I would very much appreciate having some of that data, and I imagine the Corps—are you making any cost comparisons?

General STEVENS. Cost comparisons on almost everything exists. It is safe to say, if we have not, we shall.

Ms. UNSOELD. I am all for getting the Columbia River squaw fish as close to being extinct as possible.

Thank you very much, Senator Hatfield.

Mr. STRONG. I would like to address the question raised by Congresswoman Unsoeld regarding fish bypass. The question implies that any mortality is acceptable. I think that is the pervasive attitude. We built the structures; we invest the costs there; and irrespective of the losses, that the losses can continue. These attitudes that are being dealt are carried out into Federal agencies and can be just as destructive as the projects themselves.

If you were to see the 50 million or 40 million young salmon destroyed before your eyes rather than hear only a percent before you across the table, I guarantee you you would not walk away with the same feeling you have today. Those power structures that destroy are not kind. They certainly are not humane to the life that we say we are trying to protect. And to think that some of these dams were built without any bypass facilities at all is providing even further inhumanity by ourselves.

I just hope that the tenor in which these questions are asked does not lend themselves to the implication that any mortality is acceptable upon the life that we as tribes are inherent to our way of life. Thank you.

Senator HATFIELD. Do you have any problem with the facilitating role? Any comments?

Mr. DUNCAN. Senator, we have discussed it at length, and we may or may not be the best possible to do this. We certainly do have some valuable characteristics the way we are set up. We are regional; all the States are involved; we already do tradeoffs on the different uses of the river; and we got involved in a number of the negotiations that led to agreements that we think are beneficial to fish.

I guess the short answer is that the council is prepared to step forward and assume as much responsibility as useful to the region.

Senator HATFIELD. You will accept that?

Mr. DUNCAN. Yes.

Senator HATFIELD. You understand I am not asking the council to come up with a total solution, but to explore the options. Is there any difficulty with any Federal agency working together on this basis of a regional initiative?

Mr. JURA. We have no objections.

General STEVENS. Senator, the Corps would participate completely in such efforts. The council's role extends, as I understand it, only so far as power and fish and wildlife concerns, not to navigation, recreation, and so forth. So we would somehow have to resolve that.

Senator HATFIELD. You would have no problem in making data available? Participating?

General STEVENS. Absolutely not, sir.

Mr. KEYS. Your recommendation we, at this time, agree with fully.

Senator HATFIELD. Any of you gentlemen who have proceeded honestly and get back and your lawyers get ahold of you or agencies or some of your staff people and say you do not have the authority or you cannot do that, let me know, please, quickly

My daughter is a lawyer, and she says I have to quit bashing lawyers in public. I am not really bashing, but I have seen bureaucracy function over the years. I want to make sure that you can participate, as far as the Federal agencies are concerned.

Just a curiosity that I have, Mr. Jura. What is your annual fish and wildlife budget, about?

Mr. JURA. If we look at just the dollars that are directed to specific programs, not the amounts that Congressman Wyden was asking me about, $52 million. It runs in the $50 to $60 million range.

Senator HATFIELD. What do the regional ratepayers pay for terminating the WPPSS nuclear powerplants No. 1 and No. 3, about?

Mr. JURA. Well, let me calculate it very quickly in my head. That about $4 billion of investment; in the past that has averaged at approximately 10 percent. So there would be about $400 million annual debt service. But we have brought that down substantially through our successful refinancing program. But the annual debt service of that commitment that we made in the past is sizable.

Senator HATFIELD. I understand we are talking about apples and oranges, but I am trying to get a point of reference, a comparison so to speak, between the $51 million budgeted for fish and wildlife and about $400 million to service the indebtedness of the nuclear powerplant.

Let me ask you, Mr. Jura, you have professional biologists on your staff?

Mr. JURA. Yes, sir.

Senator HATFIELD. When did they find out about the situation, say, on the sockeye salmon and this danger of declining fish runs that have been demonstrated? When did your biologists find that out?

Mr. JURA. Our answer would be similar to what you heard earlier from Mr. Schmitten. I believe the State and Federal agencies—I cannot speak for them, but I think this information was out there for all of us to see. We took it into account, and we have come together to arrive at the regional council's plan and have directed our efforts accordingly.

Senator HATFIELD. Do you have a chart showing, say, from 1960 on, that your biologists monitored?

Mr. JURA. Yes, sir.

Senator HATFIELD. Could I get a copy of that for the record here?

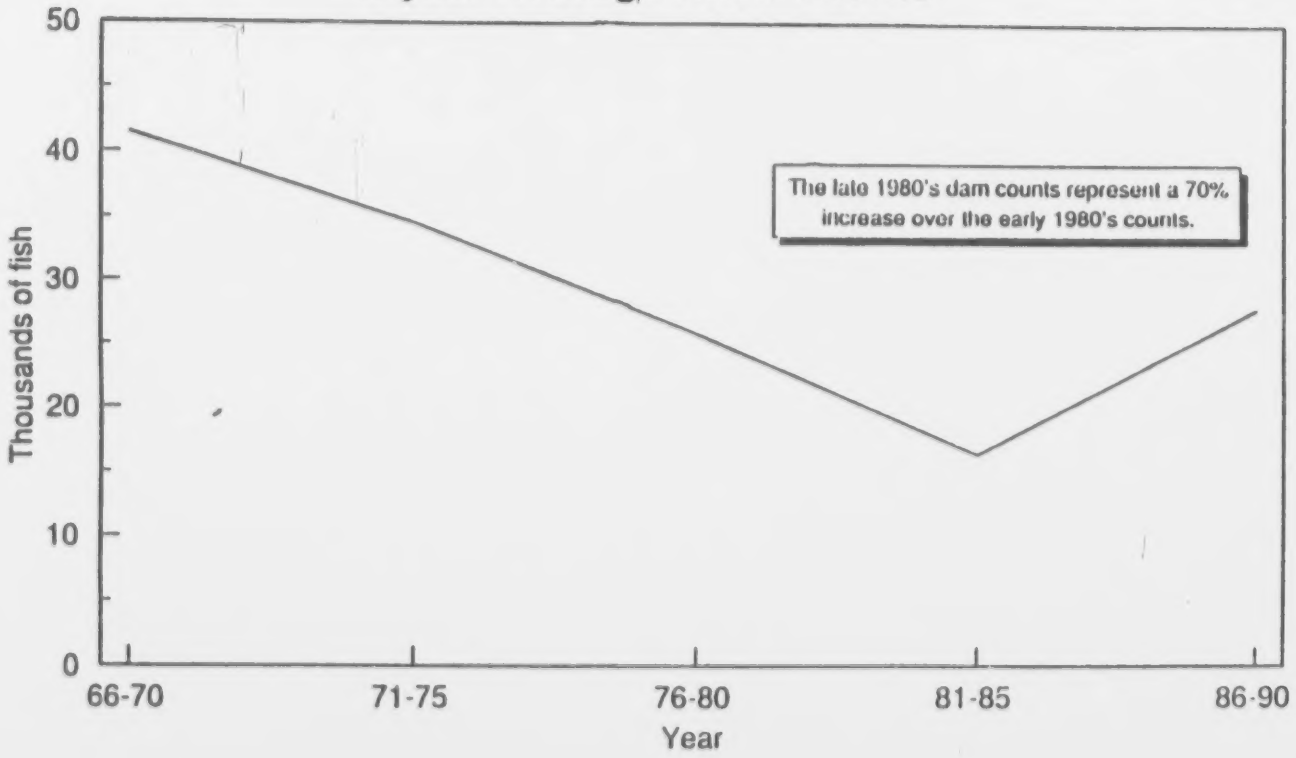
Mr. JURA. I would be happy to submit it for the record.

[The information follows:]

The National marine Fisheries Service [NMFS] and the Oregon Department of Fish and Wildlife [ODFW] provided graphs of the relative abundance of Snake River spring, summer, and fall chinook salmon in a June 1990, report to Senator Mark Hatfield. This report, entitled, "Past and Present Abundance of Snake River Sockeye, Snake River Chinook, and Lower River Coho Salmon", contained several graphs which used 5-year averages to show the trends of these salmon stocks. The 1989 data used in the NMFS/ODFW graphs were depicted separately and not averaged with other years. The enclosed BPA graphs (Attachments 1 through 6) use the same data used by NFMS and ODFW, but the 1989 data are included in a 5-year average. This more complete representation of the data presents a clearer picture of the trend in the fish runs of concern.

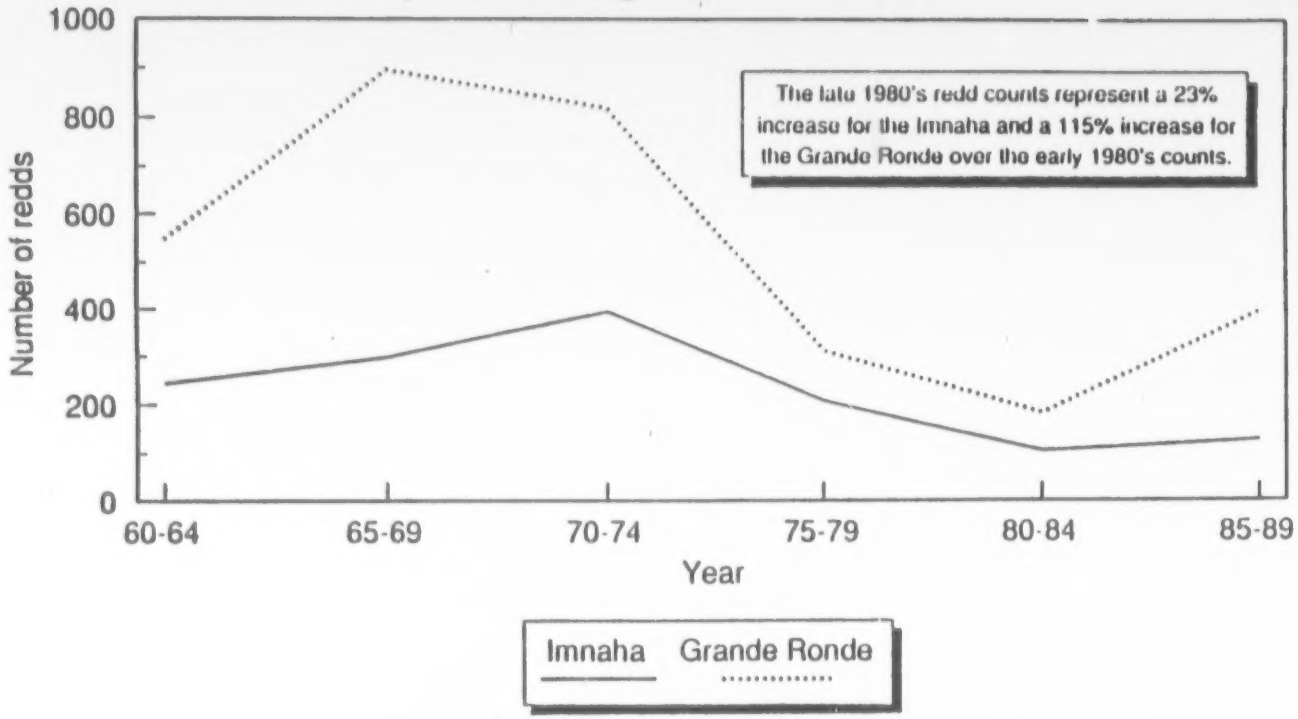
In general, BPA's graphs show that the precipitous declines in the chinook runs have been reversed and are now trending upward. Many of the runs are still at low levels and may need additional attention, but the status of these runs is less perilous than represented in the NMFS and ODFW graphs.

Ice Harbor Dam Spring Chinook
5-year Average Adult Counts



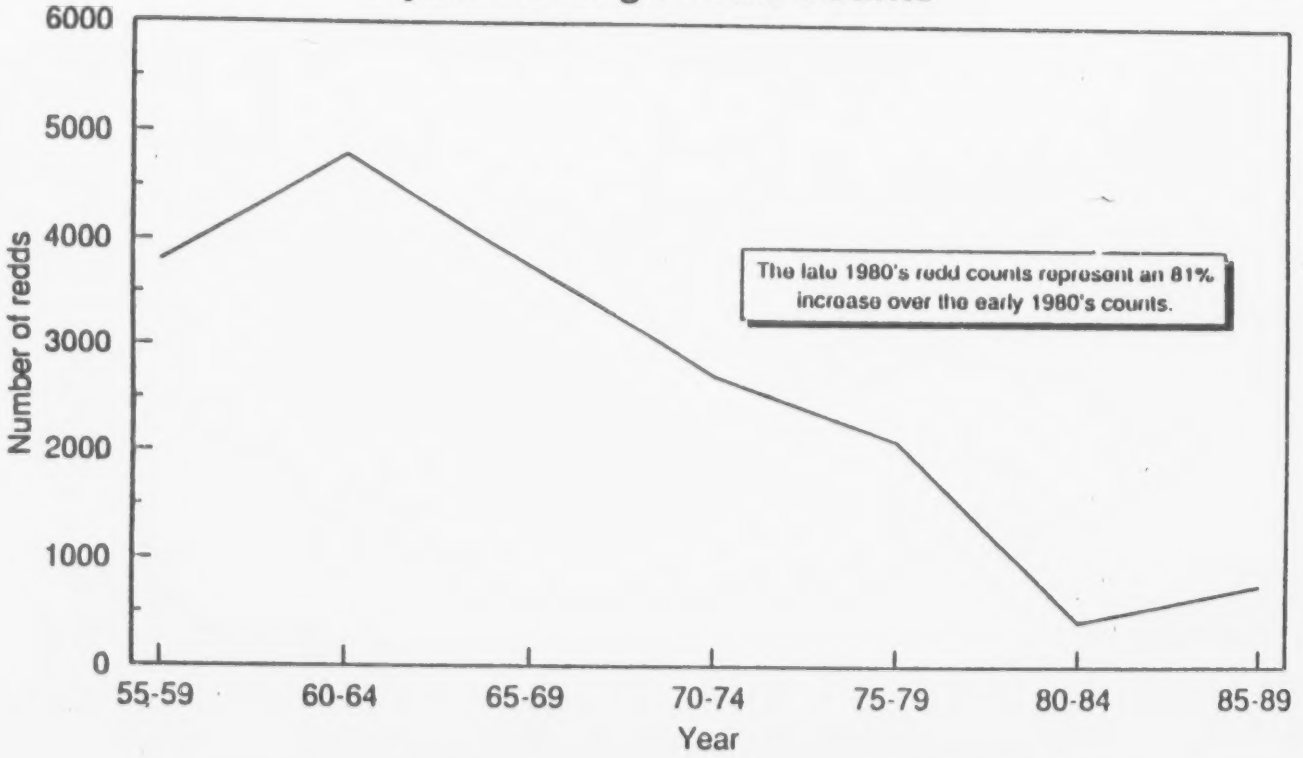
Note: This figure corresponds to Hatfield Report Figure 2.

Imnaha and Grande Ronde River Spring Chinook
5-year Average Redd Counts



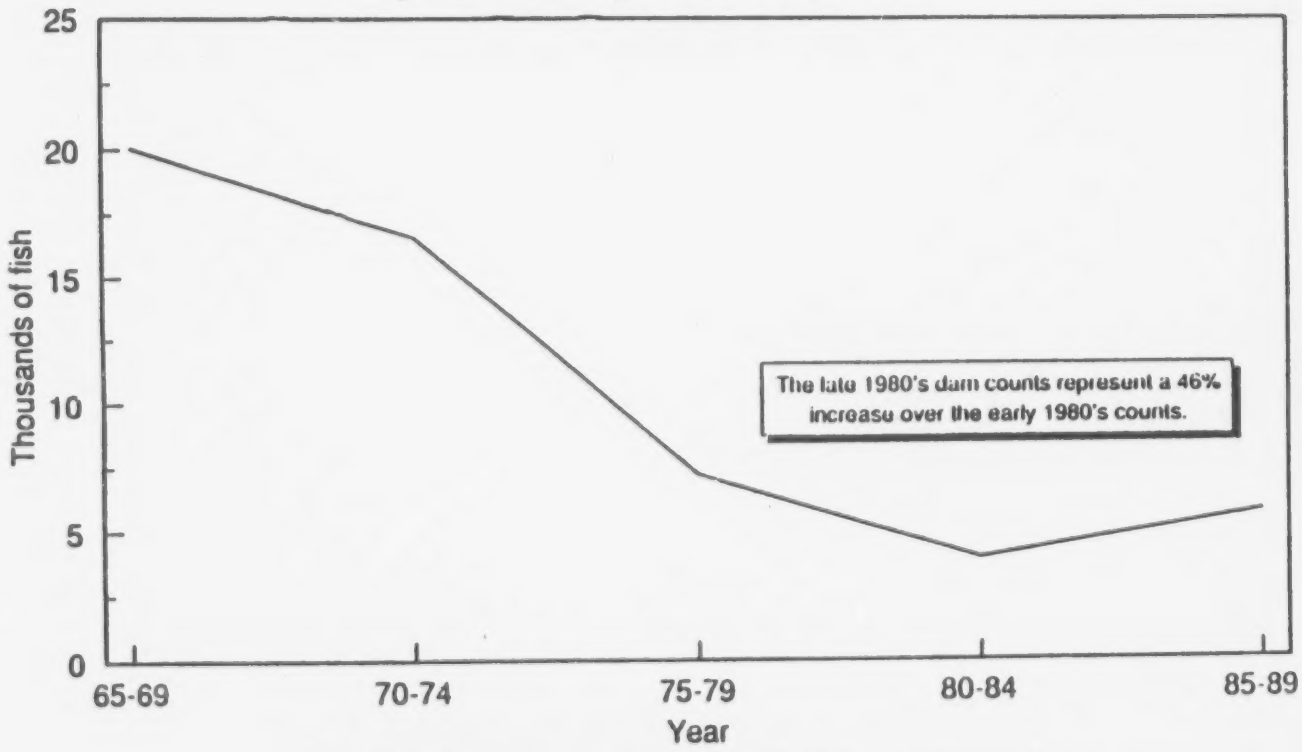
Note: This figure corresponds to Hatfield Report Figure 3.

Salmon River Spring Chinook
5-year Average Redd Counts



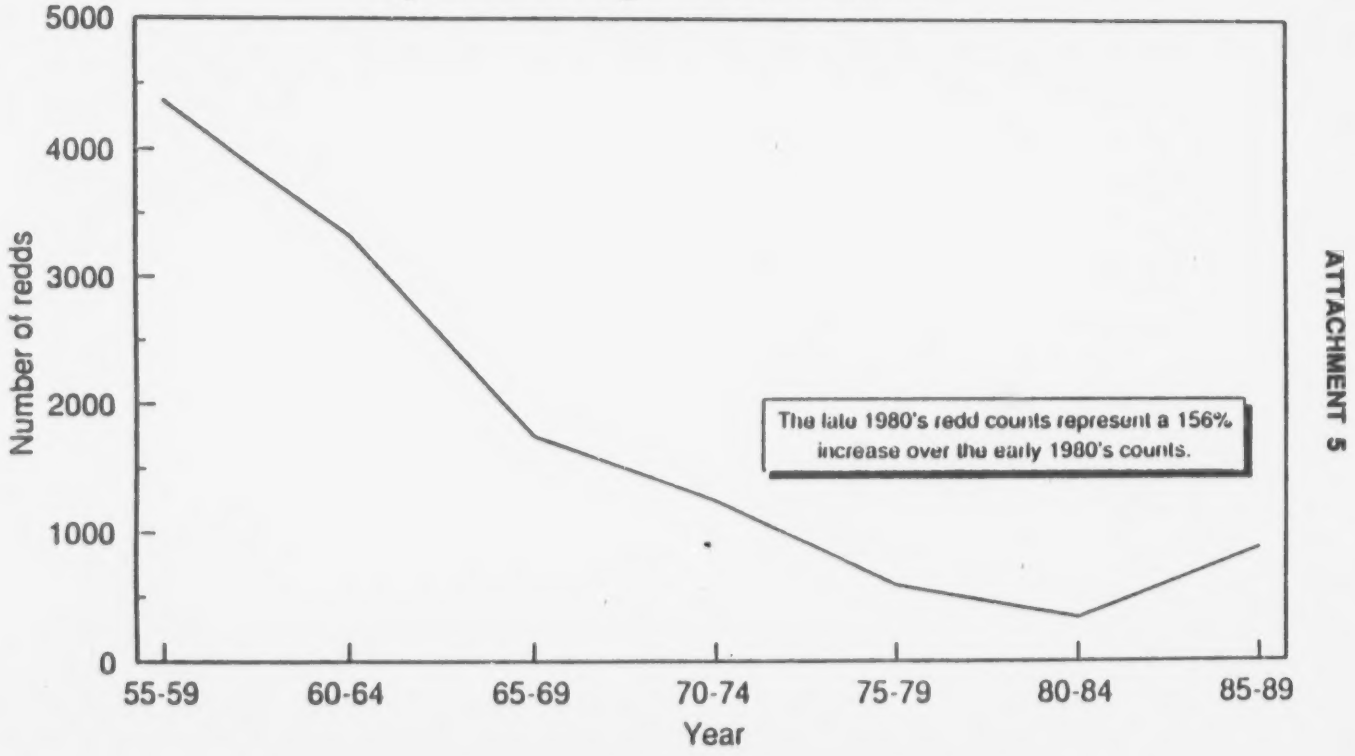
Note: This figure corresponds to Hatfield Report Figure 4.

Ice Harbor Dam Summer Chinook
5-year Average Adult Counts



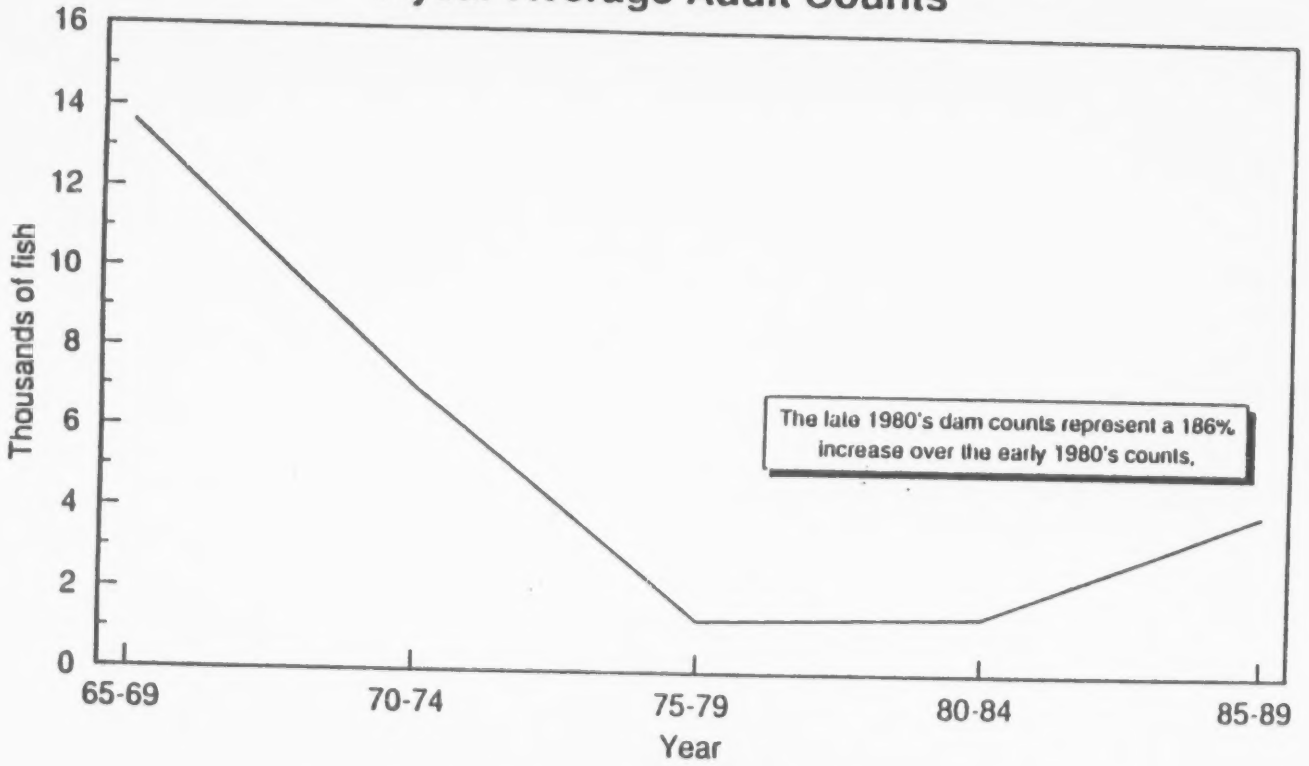
Note: This figure corresponds to Hatfield Report Figure 5.

Salmon River Summer Chinook
5-year Average Redd Counts



Note: This figure corresponds to Hatfield Report Figure 6.

Ice Harbor Dam Fall Chinook
5-year Average Adult Counts



Note: This figure corresponds to Hatfield Report Figure 7.

Senator HATFIELD. Would it show a similar record that the NMFS showed going back to 1962 or 1980 with some very, very significant declines? Do you think they might show that same general pattern?

Mr. JURA. I would assume they would be identical. In the case of the stocks that we are talking about here; yes. And in others, as has been pointed out, there are successes, and in some of the other wild fish, you would see improvements in recent years.

Senator HATFIELD. Did your biologists give you any recommendations? How did they alert you to this severe dropping and decline of natural runs? Did they give you some memorandum to say something's happening here that we ought to pay some special attention to or is this——

Mr. JURA. I have been getting closer to this issue and being advised by my staff of that matter for the past 9 months.

Senator HATFIELD. Have they suggested a measure to take or any options that might be taken to correct this?

Mr. JURA. It is my understanding we are having that discussion with others such as the regional council. That is why I had that comment in my opening remarks. We are open to accelerating some of the activities in the council's program to improve these stocks.

Senator HATFIELD. But if it is similar to the NMFS schedules of these runs, it would show that far earlier than 9 months ago your biologists would be aware that something was happening; in fact, it would be a matter of years if their record monitoring is similar to the fisheries agency; they would know something was happening. Why wasn't there any action or recommendations or signals given by your biologists?

Mr. JURA. The way we have been proceeding I think the declines have been well known. Since 1980, we have invested $1 billion on activities intended to address those declining runs. And we have seen, as Angus said earlier, improvements in certain runs and others not responding. It has been an ongoing process, and we have been learning more as we go along.

Senator HATFIELD. Mr. Jura, does the Bonneville Power Administration now support construction of fish bypass facilities on Ice Harbor and The Dalles?

Mr. JURA. We, as you know, are spilling at those projects because we do not have the screens at those facilities that's under our spill agreement. So we are supporting in that manner. We are supporting a nightmare.

We also support screens if shown that the screens will be effective and will not damage the fish. At these two projects the issues are very complex. They will be a very expensive undertaking. I believe The Dalles is now around $60 million. And it is our view that before we expend that kind of money, we need to have a complete and full understanding and some confidence that that investment will help the fish, that it will not hurt them, and that it will make a positive difference.

So, our position is, yes; we support screens. Yes; we will fund them if they are demonstrated to work and will benefit fish. Once we have done that, the spill will stop. Until then, we will spill.

[The information follows:]

GENERAL POSITION

BPA has clearly and explicitly supported the development, testing, and construction of juvenile fish bypass screens as a long-term improvement at Federal projects. Our primary concern is that the screens meet the region's expectations.

BPA has signed a 10-year agreement with the region's fishery agencies and tribes, by which we will provide spill as an alternative passage improvement until screens are installed. Major provisions of this agreement include:

—Screens will be installed if they meet agreed-upon standards and can be constructed within defined cost caps.

—If the prototype screens do not meet agreed-upon standards, any party may seek to delay installation until the screens meet the standards, or the parties may agree to a lower standard.

—Because historically, screens have performed substantially worse than expected, the agreement also provides for spill to continue after the screens are installed, but only if the parties have agreed on the standards to be met, and have conducted prototype testing to be sure the screens can meet the standards.

Effectiveness of the screens is particularly important for Ice Harbor and The Dalles because these projects have ice and trash sluiceways which may already outperform screens installed at other projects. Since bypass systems will replace or limit the sluiceways at these projects, it is important to ensure the screens will perform better than the sluiceways.

In summary, BPA continues to support the development, testing, and construction of bypass.

Senator HATFIELD. Has the Corps not now signed off on the bypasses?

General STEVENS. Senator Hatfield, we have not signed off on The Dalles or Ice Harbor. What we are doing there is expending the moneys appropriated by Congress over the last 3 years to design what would be put in place if funding was supported.

Senator HATFIELD. Well, if you have a signoff, why haven't you signed off in terms of these two? Have you not signed off because of the OMB and budgetary aspects? Or have you not signed off on the basis that your biologists in the Corps of Engineers have recommended that you not sign off?

General STEVENS. As the Administrator of Bonneville just mentioned, we have concerns about the expenditure of those funds based on research and what results those would produce. It is an economical concern that stems from a biological determination.

Senator HATFIELD. I do not know if there is any such thing as pure science any more than anything else is pure. But again, let me rephrase my question. Is it based on science or economics?

General STEVENS. It is the state of our knowledge based on current science and then leading into the economic question, with the costs exceeding the benefits at this point. Having said that, we are engaged in design today for a system that would be installed if funded.

Senator HATFIELD. Let me cite an example as an analogy. There is the upper Klamath River that has become a great point of controversy regarding a water diversion project constructed under a plan that has been advanced by the city and other local people and a license application pending before Federal Energy Regulatory Commission.

At the same time that we saw that process moving and the wild and scenic rivers bill which I had about 18 months ago introduced, and which added 40 rivers to the national system, we excluded the Klamath on the basis that it was under study by the BLM. The eli-

gibility and suitability study by the BLM was being ordered, and also the FERC process was already underway.

Here a few months ago the BLM announced the results of their study which said the river was eligible and complied with those requirements under the National Wild and Scenic Rivers Act.

At a hearing over the upper Klamath River in the House of Representatives the other day, the House Interior Committee heard testimony on Congressmen DeFazio's, AuCoin's, and Wyden's bill to designate that river as a wild and scenic river under the Federal statute. The BLM testified. As I recall their testimony, under the opposition of some of the other Congressmen of Oregon, BLM indicated perhaps it should be studied further.

This is part of the frustration that we all feel, I am sure. But in effect, what that was saying to me was one of three things. One, that political pressure was on; No. 2, their original assessment under their study was not really a valid one that they could defend; and/or No. 3, it was a bureaucratic response to an idea that, well, we are waiting for a perfect science or something perfect, and, therefore, we have to study it further. We study so many things so many times sometimes it is another way of avoiding the issue.

I am totally familiar with these fish bypass facilities because I fight for the money every time in the appropriations process to get even one. I know the process. You may have even asked for those based upon good faith.

Along comes the OMB, part of the budgetary process, and they say reduce your budget and take these out. And you have to put your hat on to represent your issue and come before our Appropriations Committee to represent that point of view.

But I am really bothered as to why we have had to push these fish bypasses on you—on you, meaning those agencies charged with some responsibility for maintaining those fish runs. We as Congressmen have actually forced it upon you. I know part of it is the OMB.

But it also raises in my thinking whether your responses even here today are telling me that your experts in biology are making final decisions based on scientific issues or budgetary issues?

If it is budgetary, let me remove that possibility at this moment. We will put the money in the appropriations. We will put it in in 1991. I have the money for those fish bypasses. I want to make certain because I have biological science advice from other sources saying those bypasses are fundamental.

I am trying to clarify for my own thinking here. I do not want to put money into something that has no scientific validity or scientific base. You are confusing me, mixing your budget with your science.

General STEVENS. Let me clarify my comments, Senator. Certainly we would achieve some benefits were those bypasses to be installed in Ice Harbor and The Dalles. What I am suggesting is—these are my biologists—that when they have reviewed the results that we would achieve from information to date on these bypasses, they would not be the most cost beneficial.

Now, certainly we could proceed to the end solution for this. As I said, sir, we are designing them today.

Senator HATFIELD. General, let me ask you. How did we get where we are today, from your standpoint, from your expertise? How did we get here? Did you do everything you could have done, should have done before today? We are at a point to take every option we have, in my view, to restore this and correct this. Since you are saying what you are, tell me how we got here.

General STEVENS. Senator, I, as you have suggested, go through many budgetary processes before you see a budget in the Senate. I think very honestly, very personally that the Army Corps of Engineers has a commitment to the fish and wildlife resources in this country. I think we have proceeded as judiciously and efficiently as we could have done given the circumstances in the last 10 years. I think, frankly, we are moving right now quicker than we have before, for very obvious reasons.

Senator HATFIELD. General, you do not have time. In my view, this endangered species process is going to come right down on our head. Yours as well. Every other Federal agency that is charged with the responsibility of maintaining these fisheries. I just think that the long time bomb is ticking so rapidly we cannot do business as usual. If you need the resources to meet this crunch, tell me what they are.

And remember, as a member of the Appropriations Committee, we have the right to ask you those questions and notwithstanding your instructions from the President of the United States, from the Director of the OMB, you have to answer those questions that a member of the Appropriations Committee asks you in matters related to your budgets. Do you understand that?

General STEVENS. Yes, sir.

Senator HATFIELD. So I am taking responsibility for any kind of internal control system exercised within the agencies which is personally limiting. I just want to remind you as a member of the Appropriations Committee you have to answer my questions, notwithstanding what your instructions are within the organization. So I take that responsibility to keep you out of the hot seat. You can say I asked you those questions if that is the only way you can be sure, if you need to take this back to your internal controls.

Would you give for the record those fish and wildlife moneys that were appropriated, budgeted, but not obligated? Because here is another very fine point I have to get. I want the same, General, from you: appropriations, budgeted, appropriated, and not obligated. What happened to those nonobligated funds? Because I happen to be aware there is some such in these agencies. The record will show we budgeted it. You asked for it, we budgeted it and appropriated it, but they were not necessarily obligated. That is what I want.

General STEVENS. Yes, sir; I will be happy to provide that information.

[The information follows:]

Sir, the following table shows the information you asked for for the Columbia River Juvenile Fish Bypass Program by project since funds were first appropriated in fiscal year 1988. Actual obligations and expenditures are through July 31, 1990. By the end of fiscal year 1990 we will obligate all but $3.5 million and that will be used in fiscal year 1991.

COLUMBIA RIVER JUVENILE FISH BYPASS PROGRAM—CORPS OF ENGINEERS/NORTH PACIFIC DIVISION

[In thousands of dollars]

	Congressional appropriation				Through July 31, 1990	
	Fiscal year—				Obligated 1988–90	Expenditures 1988–90
	1988	1989	1990 [1]	Total 1988–90		
Lower Granite	3,498	1,600	2,958	8,056	5,822	5,216
Little Goose	3,263	4,700	4,043	12,006	11,312	11,227
Lower Monumental	1,140	1,000	99	2,239	1,467	1,424
Ice Harbor	290	400	99	789	551	543
McNary		1,200	1,578	2,778	2,454	2,013
The Dalles	510	700	986	2,196	1,744	1,547
Total	8,701	9,600	9,763	28,064	23,350	21,970

[1] Appropriations shown for fiscal year 1990 reflect GRH sequestration of 1.4 percent.

Senator HATFIELD. Please provide, for the record, a comparison of the funds which have been budgeted, appropriated, and not obligated for fish and wildlife activities since passage of the Pacific Northwest Electric Power Planning and Conservation Act.

Mr. JURA. I would be glad to provide that.

[The information follows:]

Since the passage of the Federal Columbia River Transmission System Act of 1974, BPA operates as a self-financing entity and does not receive annual appropriations. BPA finances its operations through receipts from power sales and from the sale of bonds to the U.S. Treasury. These funds are held in the Bonneville Power Administration fund, a fund of the U.S. Treasury. The Pacific Northwest Power Act of 1980 authorized BPA to borrow funds from the U.S. Treasury through the sale of bonds to fund capital investments in the Fish and Wildlife Program as well as for the Energy Conservation Program.

BPA annually submits its budget to the Department of Energy, the Office of Management and Budget, and the Appropriations Committees of Congress for review. Congress has reserved the power to direct or limit BPA's expenditures in an appropriations act. Funds included in BPA's Fish and Wildlife Program budget are designated for specific activities that are contained both in the Northwest Power Planning Council's Fish and Wildlife Program and subsequently, BPA's Fish and Wildlife Annual Implementation Plan. The Annual Implementation Plan is developed in consultation with State and Federal Fish and Wildlife Agencies and Tribes through the Implementation Planning Process. Funds may also be included in the budget for specific activities that support accomplishment of BPA's overall fish and wildlife responsibilities.

In all cases, inclusion of an activity in BPA's budget is based on a number of factors, including a project's complexity, timing requirements, workload, multiyear funding pattern, and the degree to which it is determined to be ready for implementation. The budget plans for the Fish and Wildlife Program and obligations are not necessarily the same. Administrative processes, incomplete project proposals, and other factors account for most of the fiscal year unobligated differences.

These differences are not "lost" financial resources to the program in the same sense an appropriation is lost if funds are not obligated within a given fiscal year. BPA may determine, where priority activities contained in the Annual Implementation Plan went unobligated, that the activities would be implemented in the following fiscal year with a corresponding increase in the budget plan. In these special instances, where such actions result in a 10 percent or greater increase in budget over the budget plan previously reviewed by Congress, BPA has normally notified Congress of the change.

A breakdown in BPA's Fish and Wildlife Program obligations by fiscal year since passage of the Pacific Northwest Electric Power Planning and Conservation Act, is shown in a table (Attachment 7) which I would like to insert into the record.

Since passage of the Regional Act, BPA has devoted $1 billion in electricity ratepayer revenues to protecting and improving the Columbia Basin's fishery resources.

No agency in the Pacific Northwest invests more in fish and wildlife than we do. Of the $1 billion invested, about $200 million has been spent directly through BPA's Fish and Wildlife Program, about $400 million reflects repayment to the Corps of Engineers and Bureau of Reclamation for repayment of their expenses, while another $400 million in revenues has been foregone through spill and our Water Budget Program.

We request that the attached table titled "Bonneville Power Administration Fish and Wildlife Investments (Outlays)" (Attachment 8) be inserted for the record. The table illustrates the above points concerning BPA's investment in Northwest fish and wildlife resources.

Attachment 7

BONNEVILLE POWER ADMINISTRATION
FISH AND WILDLIFE PROGRAM OBLIGATIONS
(Dollars in Millions)

FISCAL YEAR	BUDGET 1/	ACTUAL OBLIGATIONS 2/ EXPENSE	CAPITAL	TOTAL	NOT OBLIGATED 3/ EXPENSE	CAPITAL
1981	1.6	2.3		2.3	(.7)	
1982	4.2	4.7		4.7	(.5)	
1983	10.2	9.1		9.1	1.1	
1984	22.1	19.6		19.6	2.5	
1985	33.7	15.9	10.2	26.1	8.2	(.6)
1986	34.2	19.6	8.0	27.6	4.1	2.5
1987	37.5	26.3	5.9	32.2	1.0	4.3
1988	39.7	13.0	10.0	23.0	11.0	5.7
1989	37.4	26.6	8.1	34.7	3.1	(.4)

1/ Based on the following Fiscal Year's Congressional Budget.
2/ Based on the second following Fiscal Year's Congressional Budget.
3/ Difference when compared to the budget, according to the planned expense and capital portions of the program. "( )" indicate obligations that were greater than planned in the budget.

29-Jun-90
DRBF

BONNEVILLE POWER ADMINISTRATION
FISH AND WILDLIFE INVESTMENTS (OUTLAYS)
($ in millions by Fiscal Year)

	ACTUALS 1/										ESTIMATES 1/				
FISH AND WILDLIFE PROGRAM	1981	1982	1983	1984	1985	1986	1987	1988	1989	TOTAL	1990	1991	1992	1993	TOTAL
DIRECT 2/															
BPA DEPRECIATION (CAP. PROJ.)						1	1	1	2		3	4	5	6	
BPA EXPENSE (OUTLAYS)			9	20	16	20	22	19	23		30	36	35	36	
BPA INTEREST EXPENSE					1	1	1	2	2		3	5	6	8	
INDIRECT (FOREGONE REVS) 3/															
WATER BUDGET				12	17	74	11	40	40		40	40	40	40	
SPILL			1	8	27	19	9	10	15		15	15	15	15	
SUBTOTAL F & W PROGRAM			10	40	61	[illegible]	44	72	82	424	91	100	101	105	397
OTHER F & W EXPENDITURES															
DIRECT															
BPA EXPENSE (OUTLAYS)	2	5													
O & M LOWER SNAKE HATC	1	1	2	4	5	5	6	5	8		9	10	11	12	
CORPS O&M (INCL. BYPASS)	5	8	9	10	11	16	21	11	12		12	12	12	12	
CORPS DEPRECIATION 4/	3	3	4	4	4	5	6	6	6		6	6	7	7	
CORPS INTEREST EXP 5/	5	8	9	10	11	12	14	15	14		14	15	16	16	
INDIRECT (FOREGONE REVS)															
SPILL	3	14													
SUBTOTAL OTHER F&W EXPEND	19	39	24	28	31	38	47	37	40	303	41	43	48	49	181
TOTAL BPA F&W INVESTMENT	19	39	34	68	92	153	91	109	122	727	132	143	149	154	578

1/ FY 1981-1989 estimated actual outlays are used where actual outlays are not available. FY 1990-1991 are estimated outlays consistent with assumptions in BPA's 1990 PIP material.

2/ Through FY 1989, BPA has capitalized a total of $30.6 million of F&W assets and amortized (depreciated) $4.3 million. BPA's current F&W policy is to amortize investments over 15 years. Interest expense is based on total investment, net of accumulated amortization. BPA has obligations in the capital portion of its budget totaling about $40 million through FY 1989. The estimates provided here may include a small amount of funding for non-program activities.

3/ Spill and Water Budget costs prior to FY 1986 were estimated using water and power marketing conditions for those specific years. Water Budget costs in FY 1986 and FY 1987 were based on power planning model estimates of a 300 MW loss of surplus firm energy in conjunction with the power marketing conditions for those specific years. Spill costs in FY 1986 and FY 1987 are based on power planning model estimates using water conditions similar to those specific years. Water Budget and Spill costs for FY 1988 through FY 1991 are also power planning model estimates and represent the average costs over a wide range of possible water and power marketing conditions. Water Budget and Spill costs vary significantly from year to year with different water conditions and price fluctuations in the energy market. These estimates have a high degree of uncertainty associated with a large number of power marketing assumptions.

4/ Depreciation is based on unaudited estimates provided by the Corps. Bypass investments are based on total costs of $211 million (1988 dollars) and are consistent with the Spill Agreement.

5/ Interest expense is based on the Corps' estimates of F&W investments. Interest expense is based on investments, net of accumulated depreciation. A weighted average interest rate is used to compute interst expense.

Senator HATFIELD. Congressman Wyden, your patience is the patience of Job, but I do feel these are points necessary.

Mr. WYDEN. Senator, I think you are making an excellent point on the resources question. And I have to say for Mr. Jura, for the BPA, and the general, for the Corps, I would say this is a question now of political will, and Senator Hatfield has brought it down to a question of resources.

Back when I was a member of the Energy and Commerce Committee, you all come to us to construct nuclear plants; you come to us when you want to get transmission lines. And by God it moves like grease going through a goose. It moves fast, all these studies and all these internal steps that you all are talking about at the Corps. Well, when you all want to get at it, it moves quick.

And I think what Senator Hatfield is talking about, what we are both concerned about is whether you are going to get the wakeup call. What we need to do is make some real changes in agency culture in some of these policies, and I am not convinced it is moving.

Let me ask you this question from the Corps' standpoint. The Senator talked about your responsibilities charged to protect those fish runs. You gave an answer very hesitant. We have studies, studies, studies about these fish ladders. What is the alternative? What alternative does the Corps propose to pursue this quickly?

General STEVENS. The alternative, Congressman Wyden, to installing these facilities, those alternatives we have in place right now. The issue there has been, and I hate to belabor this point, but has been the degree that we increase the resource of returning adult fish by installation of these facilities.

Why is that? The answer is because we have other mechanisms in the system which have heretofore demonstrated higher returns. But, I get your point.

Mr. WYDEN What are those other?

General STEVENS. We move fish by barges, trucks past the obstructions in the river. We have existing bypass structures, some of the structures which have been the worst offenders in the past.

Mr. WYDEN. I have to tell you if these other alternatives were working, we would not be here today with these five petitions for endangered species.

I interrupted you, Senator, but I think your point on resources is very valid. What I have to say is while I was on the Energy and Commerce Committee over the years and when you all put projects you wanted through our committee through virtually a snap of the fingers when it was important to you.

The Senator went through the question of the nuclear plants. I would like to see the same kind of political punch and some kind of aggressiveness brought now to this question that you all had over the years.

Senator HATFIELD. Gentlemen, I have such deep respect for you personally and for your tremendous leadership. I am going to communicate to the agency directors, the heads of your departments in Washington, and I am going to indicate to them my basic respect and confidence in each of you.

But I am also going to say to them, very frankly, I want their assistance, their help, as we have requested yours, for the simple reason they do not want a repetition by that agency director in

Washington that could embarrass the White House and agency directors in Washington. They had better get involved now rather than later, and then they always dump on the guys out on the field. I am not going to let that happen to you. Just want you to know that.

So I press these points not in any way to create an adversarial relationship. We are together here. But at the same time I think I understand the bureaucracy you work with. I want the Chief of Corps of Engineers and Secretary of the Army, Secretary of Agriculture, or Secretary of Energy, and the Secretary of the Interior to be a part of this solution and this regional initiative.

I want you to know we are going to cover your tail on all this as well as to pursue it with you and your cooperation and support will be appreciated. But I want to assure you that I am going to move ahead. I know Congressman Wyden has other contacts and ways to do the same things: get your people back there involved as part of this team so that you are not working in conflict with the hierarchy, but in concert as you respond to our local region's commission. Thank you very much.

Mr. WYDEN. Senator, if I could, just a few other questions.

Mr. Jura, the question I will probably be asked at my town hall meeting this afternoon with my constituents about this hearing is what are your estimates or educated guesses in terms of what will happen to power rates if all of the petitions, say, are granted. Or just give us the information you have about what will happen to power rates if most or all the petitions are granted.

Mr. JURA. I'll be happy to tell you how I am responding to that question. The answer I have been giving is that the filing of a petition and potential for these species to be listed has significant exposure for the hydroelectric system, as well as other users of the river.

In our case, that could mean the removal of generation on the system or generation that we could no longer rely upon. Bonneville will then be required, because of our statutory responsibilities, to provide an adequate, reliable energy supply, we would be required to look for other resources. There are costs associated with that, and as you know, sir, there are substantial costs right now. And it could have us go to acquire resources from another direction, probably thermal, or it could be coal-fired generation. It could cause us to look at powerplants differently, and the costs that result from that would have impact on Bonneville rates.

Mr. WYDEN. Have you calculated even any a minimum level: 10 percent, 20 percent?

Mr. JURA. No; in order to do that, one would have to project ahead and figure out what the recovery plan might be. I think that is inappropriate at this point. I have been saying there is exposure there, and it could be substantial.

Mr. WYDEN. Have your staff prepared papers in terms of the rate impacts and various forms of alternatives due to the listing?

Mr. JURA. No.

Mr. WYDEN. I have not looked at the rate issue at all, even on a staff basis?

Mr. JURA. It would depend on what assumptions one wanted to make, and I think that would be getting way out ahead of NMFS and its process. I am not sure it would be meaningful now.

Mr. WYDEN. I am interested in seeing what would happen under various scenarios. I have got to think your staff has done some research in this area.

Mr. JURA. It goes wherever you want to draw the line. If you remove let us say 1,200 megawatts from the river system, that is about two nuclear plants. We can certainly project the costs of completing WNP-1 and WNP-3 or other resource alternatives. Massive amounts of generation like that move you into scenarios like that. At this point, I am not sure that is productive.

Mr. WYDEN. If you lose 1,200 megawatts, you can see us firing back up plants 1 and 3?

Mr. JURA. They could become more attractive resources than they are today. If we lose our ability to generate there, then we have to find other resources. In our resource planning now, we are looking at other resources before considering those plants. But a sizable chunk like that would put us right up in there.

Mr. WYDEN. Would you do a paper for me, and I know our whole delegation would be interested in seeing it, looking at the various rate issues, take a look at in the speculative way that obviously you must. But I would really like a paper on this, and I think all our colleagues in the delegation would, because it ought to be part of the debate, ought to be part of what is discussed. Could you get that paper to me, say, in 2 weeks?

Mr. JURA. Yes, sir.

[The information follows:]

BPA has not conducted specific rate studies of Endangered Species Act [ESA] listings because both an actual listing is not certain, and effective mitigation steps are presently unclear. We can, however, provide a qualitative sense of some of the potential effects.

Power system impacts of a listing might range from small to very large depending on the specific actions that might be called for as part of a recovery plan. Such a plan could address not only power, but fish harvest, habitat, and many other factors. If these actions resulted in a reduction in hydro system power generation, the timing and quantity of power to be replaced would be critical to an assessment of impacts.

It would be speculative to guess how the Federal hydropower system might develop if an ESA listing and mitigation plan resulted in a very large derating of firm hydropower output (significantly more than 1,000 average megawatts). A number of questions would need to be addressed. Would firm energy and capacity be converted to nonfirm energy, or would the energy be lost altogether through spill? What would be the new seasonal shape of the Columbia River system, and what storage limitations would result? However, two potential results could be a need to purchase new resources or to curtail load.

Most new resources have lead times of 5 to 7 years. If reductions in system capability occurred in less time, BPA would initially have to rely on imports from outside the region and purchases from gas and oil-fired resources from within the region. These resources are constrained by both supply and transmission. In the long run, the need to acquire large amounts of resources in a relatively short schedule would tend to favor large increments of generation instead of smaller, more dispersed resources. These new resources could have associated negative environmental impacts.

Acquisition of large blocks of additional resources would result in significant expenditures and effects on wholesale electricity rates. Acquisition on a long-term basis of 1,000 megawatts of new resources to replace lost hydropower could add from $300 to $700 million to BPA's annual revenue requirement in the mid-1990's. A "rule of thumb" is that a change of $90 million in BPA's revenue requirement changes the Priority Firm rate by about 1 mill/kwh. Increases in rates would also

undoubtedly have secondary (price elasticity) effects on the loads that BPA's utility and direct service industrial customers place on BPA.

If resource lead times and limitations on imports still leave BPA with insufficiencies, load curtailment plans would need to be developed to bridge the period until new resources or purchases were available.

Mr. WYDEN. One last question for you all in the Indian tribes. Are there any other specific Federal initiatives you would like to see us pursue to restore the native stocks? I assume you all like the bypass program. Are there any other initiatives you would like to see the Federal Government do specifically for these runs?

Mr. STRONG. First of all, Congressman Wyden, I do thank you for the invitation to respond. If I can preface that remark earlier and that question which implied also that water lost to fish, again, we feel like—the question posed to Mr. Jura—water is not lost to fish, any more than air is loss on humans.

Again it is a tremendous national policy that is evolving from this hearing. It is something we admire tremendously. The lost leadership we sought is coming forth, and we appreciate that.

The initiatives that you request response to, we are very active and always have been very active in various methods of production planning, production reform. We are indeed very interested in the coordinated planning effort by tribes, Federal, and State agencies.

We are also interested in assuring the fish that there is adequate water flow, not only the Columbia, but the Snake River as well. The Snake River adjudication participation is something that we have tremendous desire to participate in. The fact that there are areas we can participate and provide better systems in lower Snake River, compensation, filing authorizations for funding, those are things that we feel are very important and very valuable.

In the preservation, development of habitat for the natural runs, we work very aggressively with the U.S. Forest Service to ensure that those lands are not only developed but they are preserved. We have made great strides toward that end.

Continued assistance in the form of funding and other relief would be advantageous to us. And finally, other than being very specific, we find that elevating fish restoration as a policy priority is perhaps the biggest thing that we can ever rely upon.

As well as, Congressman Wyden, and Senator Hatfield, perhaps this is to be the tribe summary comments. Let me say that tribes feel good that at one time when our treaties were being negotiated our chiefs were afraid. Who was going to fulfill these words that were made at treaty time? And our distinguished chief asked then Territorial Governor Stevens, "Who will fulfill these promises?" He said, "My children and their children's children."

It is pleasing that, spiritually, you must be part of those children. We always felt we were dealing with his stepchildren who did not care about his words.

We are very pleased with the level of understanding and commitment. It pleases us today that we can hear this fish restoration finally implemented as a policy. Tough decisions were made. You are reiterating those decisions today, and we are comforted by that. Thank you

Mr. WYDEN. Thank you. Please do not feel I consider water to be lost to fish. The terminology, unfortunately, refers to incurred cost

to Bonneville and the like. Your comments are very thoughtful, and we want to work with you.

Senator HATFIELD. Thank you, gentlemen. You have been very helpful today.

I would like to invite Dale Pearson of Oregon Trout and Ed Chaney, director of Northwest Resource Information Center, to come forward at this time. Welcome. We are happy to have you here today.

STATEMENT OF DALE PEARSON, OREGON TROUT

Mr. PEARSON. Thank you, Senator. I am delighted to be here today. Thank you for the opportunity to speak at this hearing. I would also like to thank you for having this hearing. I would especially like to thank you for, as you have indicated in your opening statements and in your questions to the witnesses, you reassured us that your leadership will be very important in this process and constructive and responsive to all Northwesterners.

I am here to represent Oregon Trout. Oregon Trout is the lead petitioner in a group of six copetitioners asking for endangered status determination for four Columbia River salmon runs.

The decision to petition for endangered status determination was made after considerable thought and careful study indicating that these runs have declined to such low levels that they may warrant this. The declining natural spawning populations of these salmon indicate that less than one lone fish returns to spawn for each parent spawner, and these populations are at precariously low levels.

This decision was not made lightly. Evidence reveals a long-term, steep decline in these fish since the 1970's. Various recovery actions and expenditure of millions of dollars have failed to restore these salmon and the cultural and economic incentive they provide. It is clear to anyone that extraordinary actions are required to save these fish from their plunge toward extinction.

Here we want to stress that a broad-based recovery plan is essential if these salmon are to be returned to the spawning grounds in good condition. We believe just solving one or two of these problems facing the salmon will not lead to a sustainable recovery.

It is vital that agencies, individuals, and institutions that have responsibility or authority over the use of the river dedicate their ingenuity and talents to address solutions to the continuing decline of our salmon.

We believe it is possible to bring back our salmon from the brink of extinction without imposing impacts on rivers if we emphasize cooperation and creative problem-solving over conflict and factionalization throughout this process. We have every indication that such cooperation is occurring.

I intend to depart briefly from my written statement this morning to urge both you to take strong leadership roles in seeing the cooperation and creative problem solving take place. I am very heartened by your leadership.

I would like to mention a few points here. I think it is important that the biologists and scientists who participate in the ESA determination feel confident and secure that their participation and

their findings in no way affect their careers or livelihood. The science involved in the process must be impeccable.

The Northwest has a strong history of great achievements: the taming of the Columbia, bringing light to the Northwest, bringing the desert into bloom, cleaning up the Willamette. These were not accomplished by men who did not dare to do great things. The same attitude that brought about those great achievements must be brought to bear on this problem. I think that you two have stepped up and said you would definitely be a force as such, and by your questioning of the panelists, I think you are seeking and encouraging men who match this standard. We thank you. We encourage your efforts.

We must be careful over the next few years lest we have either those who gridlock and those that do not do anything or those who panic. I believe that the process that has been recommended here for a prelisting determination program is very instructive and will result, greatly, in restoration for salmon runs.

Many of the questions and issues that we will look at during this process are difficult issues. I would like to encourage NMFS and encourage you to assist NMFS in finding the best brains who will bring the lasted in up-to-date thinking to this problem.

I might point out that the lower Columbia River chinook or earlier lower Columbia River coho were to be studied. We would request that the Hood River coho, the last surviving coho, also be looked at, and we will take appropriate steps once we hear from NMFS.

The petition groups have one objective in mind. We focus on the result in the recovery of the salmon runs. So we can also learn something from the fish. The health of our salmon resources is a measure of our ability, as one of many species needed, to maintain a diverse habitat for ourselves and our children.

The condition of the wild salmon of the Columbia River offers a very sobering question. If the lands and waters of the Northwest, their ancestral home, are no longer in sight, how bright and interesting can our future be? Thank you.

Senator HATFIELD. Thank you very much.

Mr. Chaney, I believe you are from the State of Idaho.

Mr. CHANEY. Yes, sir.

Senator HATFIELD. Glad to have you with us.

STATEMENT OF ED CHANEY, DIRECTOR, NORTHWEST INFORMATION RESOURCES CENTER

Mr. CHANEY. Thank you, Senator. I want to thank Congress for showing initiative here in the issue of trying to chart a constructive hearing work, particularly your parallel activity with endangered species process, which necessarily will focus on the science of these fish requirements.

The practical matter, well, you only know what the problems are. You have known that for 20 years, sitting here today as they did 10 years ago or 20 years ago, at least 25 years I have been involved in this issue. I think Congress' point is well taken. I think those that have the authority, responsibility, and resources to solve problems likely will do it.

As I got ready to come over here and testify today, I went back through old files and dug out testimony I had given to Congress in

1978 in Boise on hearings on the Pacific Northwest Power Planning and Restoration Act. I literally could have crossed out the date and should have, because the basic problem has not changed and I do not think the solutions have changed. We will never have enough data to overcome the reluctance to take action on problems that we have known 20 years.

The Columbia River basin is a black hole of research. The basic problem is we have built a system that does not work. It does not produce fish and industry like it is intended to. It is going to be very expensive to make it work. Folks who have that responsibility and the authority and the resources to do that basically are spending those resources trying to figure out ways to keep from expending it here, because understandably that is going to cost.

We know about all of these problems: we have your drift net fishery and we have your irrigation and this sort of thing. But I suggest before we worry too much about ocean survival conditions or irrigators out in Idaho or Sun spots or whatever the latest biological fad is, we worry about the 90-some odd percent plus mortality rate of juveniles in the river system. We do not have to go looking for problems. We have identified that one. I am not suggesting a solution to it here or how we are going to pay for it, but we do not have to look for it; we already know what that problem is.

We also know if we have solved every other problem that affect the fish, if we do not solve the downstream migratory problems, all the fish suffer, and that includes the hatchery fish. We cannot even get group stock for the hatcheries in Idaho.

To divert attention from all these other issues, all that is important and all you do have to address, the single most and only pivotal issue seems to me the challenge that we have got to face is to take the action that is required in the State process which clearly should be done on parallel to the State forestry process.

What we are trying to do is get runs. We do not need to wait 2 years to see if we have a problem, when we have 2 sockeye, 200 chinook when we had tens of thousands. We do not have to wait to see we have a serious problem. It is too late for the Sanke River coho and it may be too late for the fall chinook and sockeye. It is not too late for the spring and summer chinook.

And I liked the point you made. Political institutions have got the expertise; they have got the resources. We know what the problems are. You do not have the best solution, but for fish it is always the perfect solution or nothing. Fish have suffered this double standard of economic evaluation and risk for at least the 25 years that I have been involved.

The fact of the matter is, in spite of Congress' demand for equal treatment, it has not been delivered, and until Congress makes it clear that they are not going to let these agencies dodge that responsibility, they do not take it seriously. They are not taking it seriously. Until you make it clear through the power and appropriation process, they are not going take it seriously. It is not going to happen. Thank you.

[The statement follows:]

STATEMENT OF ED CHANEY

Senator Hatfield, Congressman Wyden, I am Ed Chaney, Director of the non-profit Northwest Resource Infomation Center, Inc. and President of Chinook Northwest, Inc. a related natural resource consulting firm, both headquartered in Eagle, Idaho. I have been professionally involved in Columbia River Basin anadromous fish issues for a quarter-century.

I appreciate the opportunity to provide testimony on the recent petitions to review certain stocks of Columbia River anadromous salmon for potential listing under the Endangered Species Act.

I commend you both for taking a leadership role in helping the region develop a constructive framework for addressing the petitions filed under the Endangered Species Act. Statesmanship unprecedented in Columbia River anadromous fish issues will be required to ensure the ESA process leads to the appropriate constructive result, i.e., eventual restoration of what once were productive salmon runs and dependent economies.

My comments today are in two parts. First, I will deal briefly with the ESA process per se. Second, I will address the key problems responsible for reducing the petitioned Snake River salmon populations to such critically low levels despite long-standing congressional intent and enormous public investment to the contrary.

In the interest of time and out of the frustration of experience I will respectfully restrict myself to plain talk.

One of the stated objectives of this hearing is to facilitate the ESA process and identify roles and responsibilities of affected organizations.

I strongly urge you to ensure full, formal respresentation throughout the ESA process by the private sector in addition to the governmental agencies and energy industry responsible for the problem. This private sector representation should include individuals who speak only for the fish. Individuals verifiably unencumbered by vested interests in harvest or activities which jeopardise fish populations.

I also strongly urge you to guard against those who would use the ESA process as an excuse to delay fish restoration efforts already required by law. The governmental agencies and energy industry responsible for the problem you are addressing today are instinctively and strategically inclined to use any pretext to study the studies and interminably argue the conclusiveness of the data at the expense of acting on observable facts. To this extent they are brethern of lobbyists for the tobacco industry; they would have us study the fish to death.

It is important that the ESA process be creatively used to enhance and expedite fish restoration programs necessary and required by law, regardless of the outcome of the ESA process.

UNDERLYING PROBLEMS

As a part of my testimony today, I've attached a copy of the testimony I submitted in 1978 to the House Subcommittee of Energy and Power, Committee on Interstate and Foreign Commerce at its Boise field hearing on what ultimately became the Pacific Northwest Electric Power Planning and Conservation Act of 1980.

What I said then would suffice today. The basic problems and the necessary solutions have not changed since 1978.

In 1978 many components of what once were the world's largest chinook salmon populations and dependent economies were in serious trouble. The people of the Northwest demanded and Congress responded with legislation containing blunt, unambiguous language directing changes in operations of the Federal Columbia River Power System to protect anadromous fish and dependent economies.

The fact that we are here today is clear evidence it didn't happen.

There have been many significant improvements and benefits to anadromous fish as a result of the Northwest Power Act. To date, however, it has not fulfilled its promise. It cannot fulfill its promise without fundamental changes in the operation of federal and federally-licensed hydroelectric projects on the main-stem Columbia and Snake Rivers.

It has long been documented that more than 95% of all juvenile anadromous fish produced in the Snake River Basin can be killed attempting to pass the eight federal dams on the lower Snake and main-stem Columbia Rivers. This rate of mortality is at once chronic and acute. If it is not substantially reduced, soon, all of the public and private investment in fish passage facilities, habitat protection and hatcheries will be wasted. The fish will become extinct, including what less than a half-century ago were the largest, most valuable components of the world's largest chinook salmon runs. For these stocks, the Endangered Species Act will be reduced to recording their passing.

The law requires these federal projects to be operated in ways that protect anadromous fish and the economies they once supported from central Idaho to southeastern Alaska. The public repeatedly has demanded they be so operated. What then is the problem?

The problem in 1990 is the same as it was in 1980, in 1960, in 1950. The main-stem hydroelectric projects were not properly designed or operated to allow for joint production of fish and energy as promised and intended. The

required changes in operation are resisted on the basis that "it would cost too much" in forgone energy revenue. Egregious double standards in risk and economic evaluation that discriminate against fish and dependent economies are applied in an effort to maximize energy revenues.

Energy interests claim ownership of all water in the main-stem Snake and Columbia Rivers. Every incremental move away from the energy status quo to protect fish is, therefore, presumed an opportunity cost in energy forgone. This cost traditionally is calculated at prices higher than paid by many energy consumers. The opportunity cost of lost fish and damaged ecomomies is ignored. The benefits of energy saved through conservation are used to keep rates low for consumers already heavily subsidized at the expense of fish and dependent economies. Energy forgone to save fish purportedly can only be replaced by building new thermal generating plants or drastically drawing down reservoirs at the expense of irrigation, recreation and other water uses.

The long-predicted results of this rigged, zero-sum approach to the production of energy and fish: Until recently, a glut of energy for which there was no market within the region, or which had to be sold at far below the actual cost of production. The loss of tens of billions of dollars to fishery-dependent economies. Social, economic and political trauma as states, Indian tribes, and local communities were pitted against each other fighting for drastically reduced supplies of fish. Devaluation and potential waste of hundreds of millions of dollars invested in fish passage facilities, habitat protection, and hatcheries. Erosion of trust and confidence in political institutions' ability to protect the public interest. And now, inevitably, desperate citizens are forced to turn to the Endangered Species Act for last-ditch relief.

It is too late for Snake River coho which recently became extinct. It is nearly too late for Snake River fall chinook and sockeye. It is not too late for spring and summer chinook and for some native steelhead runs which also are in trouble. We still have the opportunity to prevent the technologically elegant Federal Columbia River Power System from going down in history as one of mankind's greatest avoidable ecological and economic disasters.

The political institutions in this region once had vision and creativity. They conceived and built the first high voltage transmission line; the largest hydroelectric project in the U.S.; the largest single electrical transmission system in the world; the first in the U.S. and the world's largest high voltage direct current transmission line; the world's largest coordinated hydroelectric system; a seaport 500 miles inland. With the proper motivation, these same institutions can figure out how to let water run down hill during spring runoff to safely transport juvenile salmon and steelhead from headwaters to the Pacific Ocean.

Anadromous fish and hydroelectric energy are not inherently incompatible. Both need instream flows. With a properly designed and operated energy system the region can have both at optimal levels. To achieve this result will require a fundamentally different way of thinking. Instead of pitting fish and energy in zero-sum

conflict, we must devise creative ways to utilize the enormous flexibilty of the coordinated regional system. Fish protection laws to the contrary, the regional system is far out of balance toward energy production. Now those who have for so long profited from this imbalance must be prepared to incur some significant short-term costs. The region must once again make intelligent short-term investments in order to restore balance and reap the benefits of enhanced long-term productivity.

This is the unrequited promise of the Northwest Power Act. This must be the goal of the Endangered Species Act process you are initiating today.

Thank you for the opportunity to share my views on this important issue.

Senator HATFIELD. Any comments you want to make, Congressman Wyden?

Mr. WYDEN. Thank you, Senator. If you two were in the shoes today of the Corps and Bonneville, what would you recommend that they do? I think you all have been very thoughtful in trying to say we want to work together and taking measures to minimize these conflicts. And if you were in their shoes and trying to address these issues, what would you today at this point? Let us start with our friend from Oregon Trout.

Mr. PEARSON. That is a very difficult question, Congressman Wyden, because I do not have available to me the biological data that they have. The data clearly shows that the lowering of the lower Snake dams and the dropoff of the fish populations are related. You have to believe the solutions to passage should stem from the results of that construction which should manage both flow and passage.

Mr. WYDEN. Anything else that you would recommend if you were standing in the other shoes?

Mr. Chaney, would you want to comment on that?

Mr. CHANEY. Yes; I would. If I thought that the Power Act that the Congress passed as law, I would not dodge and weave and do some good things and then 10 years from now look back and wonder what is happening to the Snake River chinook and coho. If I thought that the Congress was going to see to it that the fish were to increase, I would do two things.

First thing I would do is within 6 months I would have a short-term plan to enhance flow and survival. They do not need 6 months. These people are bright. They are the most bright, creative, aggressive people we have. In 6 months they could have a plan. They are not going to like it if it costs them a lot of money.

At the same time, I would set a 1-year deadline to say what kind of energy resources do we have to have in this region to make sure we have an economic power supply 30 years from now, assuming we are going to have an optimal flow regime in the lower Snake basin and Columbia River basin. Then I would set out making the short- and long-term investments required to achieve that.

They have not done that, have made no effort to do that. I am not suggesting it is going to be easy or it is going to be cheap. But I know these people could do it if they had the will to do it.

Mr. WYDEN. Let us start with Oregon Trout. You all have talked about mistakes made by fishery agencies. I am curious. Are these essentially State of Oregon omissions or particular policies that you can point to, specific actions taken 2 years, 3 years, whatever the number of years ago which got us to this?

Mr. PEARSON. Perhaps one of the biggest problems has to do with an overreliance on experts. We really truly believed that we could mimic nature, especially ecologically or genetically with the May runs. I think when nature and biology caught up with us and we began to suspect there might be some problems there, we felt that the number of anadromous fish runs is something that we did not want to see.

And so we have the sins and errors of omission and not looking at what really has become more than sneaking suspicion. So there have been both. We have been led into paths of omission and trying to stay out of it.

One I think I would like to mention is I have seen incredible marketing campaigns on the part of the Power Commission when it did not fit their generating curve and very successful attempt to show a low curve. One of the things we are faced with on the Columbia is anadromous fish failing. I would certainly be looking strongly at the kind of measures to be taken through marketing and through calling on the public and other things to change that whole curve to match these fisheries.

Mr. WYDEN. Mr. Chaney, you want to add to that?

Mr. CHANEY. No; I think he stated it perfectly. The only thing I would add is because these agencies are forced to manage wild fish, which are important to managing costs as well, there needs to be more done for anadromous fish in areas where fishermen, in fact, having been induced to overfish because the kinds of fisheries set up.

So it is a vicious cycle. The only fish left to harvest at all are anadromous fish, and trying to protect those, you end up compounding the problems.

This is something that—one assumes we are going to resolve the bigger problem and that is the loss of the wild fish through the Federal PUD project. Then the possibility and burden for maintaining the fisheries is not a shift to mainstock fisheries, which unfortunately does not have a good record of being able to change and meet biological needs.

Mr. WYDEN. Thank you.

Senator HATFIELD. Thank you, Mr. Congressman. Gentlemen, I am not going to detain you long with a series of questions. You have mentioned the need for assessment of our energy use and our energy plans. I could not agree with you more.

But the Northwest Power Act offered the one particular amendment which should be put into law; for the first time in our history, conservation is to be considered the equivalent to a new source of energy. However, those words only work until they are actually implemented. I think Bonneville is certainly moving in that direction, indicating that conservation has to be put into practice as well as being in theory as a new resource.

As you commented, Mr. Chaney, we talk about water. We are talking about certainly more than fisheries. We are talking about

all multiple uses and multiple demands and competition for the water. As this Nation has failed to develop a comprehensive energy policy, so have we failed to develop a comprehensive water policy.

I do not have to cite the statistics; you know them well. You know probably overall the largest operator in this country is in 13 Midwestern States; you know what is happening to the water tables throughout the Southwestern States, throughout the whole country, which has led to my proposal that we adopt a national comprehensive water policy strategy.

It takes more than policy; we need to rely on a strategy. No species can live without water; some may survive without oxygen, but none can live without water. It is a fundamental cornerstone.

You look at what is happening and the failure to address that issue. It is alarming. And I am hopeful that out of this kind of focus on the fisheries on the Columbia, we can get some momentum behind this national commission that helps develop the strategy for comprehensive water policy because they all interrelate.

We will have to put in context both energy and water. Our next panel will illustrate my point. We have to look at the comprehensive approach, which is that fisheries are so fundamental yet nonexclusive. I think it is a very good launching pad to really take on the full scope of the problem.

I know that people like yourselves who feel specialized in fisheries certainly are those who see conservation of energy from water competition as it relates to flows of the river. So, perhaps we are really taking on a much bigger issue here today to resolve. We are going to take on more than just fisheries.

I want to thank you very much.

Now, I would like to have Al Wright, executive director of Pacific Northwest Utilities Conference Committee; Glenn Vanselow, executive director of the Pacific Northwest Waterways Association; and John Rosholt, attorney from the law firm of Nelson & Rosholt in Twin Falls come up here please.

Mr. Wright, you want to start off?

STATEMENT OF AL WRIGHT, EXECUTIVE DIRECTOR, PACIFIC NORTHWEST UTILITIES CONFERENCE COMMITTEE

Mr. WRIGHT. Thank you, Senator Hatfield, Congressman Wyden. My name is Al Wright. I am the executive director of Pacfic Northwest Utilities Conference Committee. Our voluntary organization serves both public and private utilities throughout four Northwest States as well as direct service industries from Bonneville. PNCC members serve over 4 million customers throughout the Northwest and make up about 94 percent of the region's electric consumers. On behalf of PNCC's membership, I would like to thank you for the opportunity to testify in this hearing.

I was thinking here in the last few minutes of what I could say in summary that had not been said already, to at least make it sound interesting. So what I think I will do is try to address some of the questions you have asked other parties.

First of all, what are some of the things we have done right? We have been providing some forms of fish protection measures since 1937. Since 1980 we have dramatically accelerated the fish mitiga-

tion programs on the Columbia River. As you have heard we have spent $1 billion on the decade, et cetera.

Is there anything we are doing right out of all of this? Our answer is "Yes." There is considerable success we can turn to. We reached regional consensus target on fish mitigation programs to try to double the run size. Now, that is not just an accounting technique which says we will count every fish and we do not care where it comes from; that tells you our target is we are going to try to double all the run sizes. We recognize there was upriver wild fish. We were not going to meet this program just through hatchery predation.

We have been successful in increasing naturally produced fish in the upper river in a number of tributaries along the mainstem. We have overall increased fish runs in the Columbia by about 300,000 fish.

Now, based on all that, the criticism that brought about the filings on the endangered species was the region, all of us collectively, have concentrated too much on harvestable fish, and we had that concentration at the expense of the wild fish. That criticism is at least somewhat valid.

We do have wild stocks that have declined and are in low populations. The question has been asked, how long have we known that? We have known that since the mid 1970's. There is no new news here. This is a well-known fact, and it is the reason we are spending $1 billion and the reason that that budget is up $200 million a year total. This is nothing new to us just because somebody filed a piece of paper with National Fisheries Service. We have known these stocks are woefully low. We are working hard to correct that.

Have we been totally successful? No; we have not. Depending on how you evaluate the data, some of these stocks, if you look at more than just 1989, some of these stocks on a 5-year average have been coming around; they have improved a little bit. Is this enough? Nowhere near enough.

The last question, from our point of view, is we believe, based on our experience and our record on the river, that there are problems and they can be fixed.

Second, we believe those problems can be fixed without dramatically tearing apart the economy of the Northwest. We feel the National Marine Fisheries Service has an obligation to make a critical threshold determination. We are, of course, strongly urging you to support that activity. We are not afraid of that activity. We will live with the best available data and we will live with the determination of that.

But more importantly, with or without a listing, what you do with the fish is the same. The fix that needs to increase these wild stocks is one that we think needs focus, maybe more focus than we have given it. We think that can be done and we think it can be done in a manner, as I said, that will not tear the economy apart in the Northwest. We think the Regional Power Act is working, and we think it is working pretty well.

There may be things that need doing, but our request to you, Senator Hatfield, and you, Congressman Wyden, and the rest of the Northwest delegation is to provide us the rate water to make matters calm enough that those fixes can be developed in a pru-

dent, systematic manner that will not tear the Northwest economy apart and still be done in a reasonable amount of time to be sure we develop the goals of turning all the fish runs around in the Columbia River.

Again, I thank you for the opportunity to address you today.

Senator HATFIELD. Thank you.

[The statement follows:]

STATEMENT OF AL WRIGHT

Senator Hatfield, Congressman Wyden, my name is Al Wright, Executive Director of the Pacific Northwest Utilities Conference Committee (PNUCC). PNUCC is a non-profit association of public and private electric utilities and direct service industries in Oregon, Washington, Idaho, and Montana. We represent these three major Bonneville Power Administration customer groups on regional power and environmental issues. We appreciate your inviting us to express our views on the endangered species petitions for Columbia Basin salmon.

Congress recognized the significant declines in the Columbia River salmon run sizes of the late 1970s. Therefore, during the development of the Pacific Northwest Electric Power Planning and Conservation Act in 1980, Congress included a provision mandating the development of a fish and wildlife program to protect, mitigate, and enhance the Columbia River fish runs affected by hydropower development and operation. The Northwest Power Planning Council set as the goal of its Fish and Wildlife Program to double the size of the 1980 fish run (2.5 million fish).

PNUCC does not believe that a crisis regarding any salmon run exists. While some salmon runs have declined, we do not believe there is any need, between now and the time that National Marine Fisheries Service (NMFS) completes its status review, to take any sudden actions for any species of fish. The Fish and Wildlife Program has been in place since 1982, and it is working. The region has worked diligently on fisheries issues over the past 10 years and has made substantial progress. Overall, the number of adult salmon and steelhead returning to the Columbia River has increased by about 300,000 fish annually.

Over the last 10 years, PNUCC has been heavily involved in analyzing, reviewing, and commenting upon fishery agencies and tribal proposals to the Northwest Power Planning Council for Fish and Wildlife Program measures. Implementation of these measures, which are funded by the Northwest's electric ratepayers, has already resulted in direct expenditures and foregone revenues of about $1 billion. In addition, Northwest generating utilities have also spent hundreds of millions of dollars mitigating and enhancing fish at their non-Federal hydropower projects. These were not the first actions taken to address impacts to fish. Since 1937, ratepayer dollars have been paying for fish hatcheries, ladders and screens to mitigate the impacts of the federal Columbia River dams.

Electric ratepayer expenditures represent the vast majority of all fisheries mitigation and enhancement expenditures on the Columbia River system.

On June 1, 1990, Oregon Department of Fish and Wildlife and the National Marine Fisheries Service submitted a report entitled "Past and Present Abundance of Snake River Sockeye, Snake River Chinook, and Lower Columbia River Coho Salmon" to Senator Hatfield. While the report provides useful information, some of the data in the report is presented in such a way that it could be misinterpreted by the lay person. For example, the report depicts redd counts (nests of eggs) for spring and summer chinook in five-year averages, but treats 1989 as a single-year data point. While 1989 was a decline from the upward trend of 1985-1988, using a single-year data point exaggerates the decline. In fact, 1989 counts were higher than some earlier counts. Viewed in consistent five-year averages, redd counts are actually up in the five-year period ending in 1989. We expect, based on dam counts of chinook, that Snake River spring chinook redd counts should be up sharply this year.

While fish runs have been trending upward since 1980, certain wild stocks of fish continue to decline. In attempting to increase the overall Columbia River runs, the needs of these specific wild stocks may have been overlooked. The successes in increasing the overall runs may be part of the problem. The focus of state and federal programs has largely been on producing fish for harvest. The measures that have been implemented have produced more hatchery fish for people to harvest, but may be adversely impacting wild stocks. It is thought that release of tens of millions of hatchery fish into the Columbia River system may result in (1) hatchery fish out-competing wild fish for space and food, (2) hatchery fish infecting wild fish with diseases; and, (3) overharvest of the smaller runs of wild fish in fisheries targeted at the large numbers of hatchery fish. If this is true, current efforts can be focused to address these issues and the specific problems of wild fish stocks that will require very specific solutions.

The Snake River sockeye run provides a good example of why specific impacts must be taken into account and why specific solutions are needed. NMFS is currently reviewing the status of these fish and PNUCC supports that process. A preliminary review by PNUCC of the scientific information indicates that while the sockeye run is depressed, it is not in danger of extinction. This is because the Redfish Lake, Idaho sockeye and the Redfish Lake kokanee constitute a single population.

(Kokanee and sockeye are the same species, Oncorhynchus nerka. Sockeye are the anadromous form of the species and kokanee can go to sea and become sockeye.) The Redfish Lake kokanee population appears to be in no danger and evidence indicates these fish are supplying sockeye for the Snake River run. If desired, these kokanee could be used to increase that sockeye run.

Several circumstances appear to be impacting these fish. First, current harvest management in the Columbia River ignores the escapement needs of the Snake River sockeye, since the harvest level is based on the total Columbia River sockeye run, which includes a sizeable run destined for the Wenatchee and Okanogan rivers. Second, sockeye habitat in the Snake River drainage was severely reduced when Idaho Department of Fish and Game poisoned-out sockeye from Yellowbelly, Petit, and Stanley lakes in the early 1960s and converted them to trout lakes. Barrier dams were placed at the entrance to these lakes to assure that sockeye did not enter and become reestablished. Third, irrigation withdrawals prevent sockeye from entering Alturus Lake, which could be used by the sockeye. And, fourth, Water Budget flows are used to move hatchery fish between the hydropower projects instead of assisting the Snake River wild sockeye, which migrate later in the year.

Several measures could be taken to increase the size of the sockeye run: (1) change harvest levels or practices to allow more adult Snake River sockeye to return and spawn; (2) allow sockeye to reestablish in the trout lakes; (3) limit irrigation withdrawals to allow sockeye access to Alturus Lake; and, (4) target Water Budget flows to move the wild sockeye instead of hatchery fish.

Of course, we need to allow the NMFS' process and its in-depth scientific review to ascertain the status of the fish runs and the adverse impacts for all the petitioned species. I am not suggesting that we jump ahead of this process. The point is, if stock declines and specific problems are identified, these can be resolved, but all who contribute to the problem must participate in the solution.

With that in mind, I'd like to point out that the status of the petitioned species and additional water flows for fish in the Columbia and Snake rivers are separable issues. Providing more flows is a generic approach that does not selectively help any particular species of fish. Any strategy to help wild fish that focuses solely on increasing fish passage at the hydroelectric dams is not likely to be

effective because it does not address problems specific to the wild stocks. The impacts to these fish are specific and the solutions to the problem must also be specific. Flows have been discussed for over a decade. We have sizably derated the firm power generating capability of the hydroelectric system to increase spring flows for fish. If the fisheries agencies are still dissatisfied with the flow levels, this issue needs to be resolved, but not in the context of endangered species.

PNUCC would like to see the following occur during the endangered species process:

1. A thorough and credible scientific review of the status of the petitioned salmon species. It is important for NMFS to have the funding and staff available to do the work that needs to be done. It is equally important that the scientific review be an open and public process where all interested parties are allowed to contribute their views directly and to participate.

2. A thoughtful and complete look at the causes of selected species declines. Additional information on all the adverse impacts to these fish is needed.

3. Investigation of measures to better protect and enhance the wild species that can be implemented within the existing fisheries management system.

PNUCC urges the Northwest Delegation to take a leadership role in assuring that the NMFS process is allowed to work and, especially, that all the scientific information is on the table before any decisions are made. We ask for your assistance in insuring that NMFS has Congressional support, funding and staff to maintain the open and public process it has assured us will be provided. NMFS has organized both technical and peer review committees, which will allow for direct participation by interested parties in the status review. This is an innovative and open procedure, and one that we believe will lead to a better conclusion. It is important that we all give NMFS our support during this status review process.

STATEMENT OF GLENN VANSELOW, EXECUTIVE DIRECTOR, PACIFIC NORTHWEST WATERWAYS ASSOCIATION

Mr. VANSELOW. Senator Hatfield, Congressman Wyden, my name is Glenn Vanselow; I am executive director of the Pacific Northwest Waterways Association [PNWA]. The PNWA is a regional association that has been working for 56 years to maintain and promote the multiple-use concept in the development and management of the Northwest region's natural resources, including the Columbia-Snake Rivers system.

PNWA membership includes organizations from Oregon, Washington, and Idaho. We represent port authority, public and private utilities, irrigation districts, grain growers and upriver elevator companies, transportation providers, and other users of the Columbia-Snake Rivers system.

Pacific Northwest Waterways Association stands firmly behind the multiple-use concept for the Columbia-Snake Rivers system. The river system is developed and each of Federal projects on the system were authorized by Congress for multiple-use purposes. Those multiple uses include power, irrigation, flood control, navigation, recreation, and fish and wildlife.

PNWA believes that all uses for which the system was developed must be protected and preserved. We recognized that Columbia River salmon are a valuable resource and part of the heritage of the Northwest.

Getting back to the very first panel and open process in conducting biological status review. The process initiated by the National Marine Fisheries should be adopted and, as discussed today, should be funded.

Two elements of that process we believe are extremely important, if not necessary, to produce credible results and attain the best science available. PNWA supports NMFS including biologists from outside the agency on an active technical committee.

We support the establishment of the peer review committee of the best available scientists from our universities. We believe that there are several agencies that do have qualified biologists, including Bonneville Power, the Pacific Northwest Utilities Conference Committee, direct service industries, and the Port of Portland, among others.

It is important that those in the peer review committee be selected in a manner which provides all users with input to the process and that both committees truly function and participate in the decisionmaking process.

We are particularly concerned about the process selection of the participants; and as you have mentioned a little bit earlier, science, like the Constitution, is open to interpretation and human judgment. No one wants a packed court deciding this issue. PNWA is seeking, and the proposed NMFS process appears to provide, an open and fair process for conducting the biological status review.

We further believe that solutions should not be imposed until after the biological review is completed.

Mr. Chairman, we were not aware of your proposal for a predecisional process at the time of writing this statement. We appreciate your proposal. We believe that having options prepared and available for action is the prudent way to proceed. We strongly believe

that the determination for causes in the NMFS process must be completed prior to implementation of a solution. You earlier characterized the potential for that process in fairly dramatic terms.

Questions which have been raised today about current management practices indicate it may be working for overall increased fish runs but may not be working for these petition species to the extent we desire. Our concerns that more extreme general solutions may or may not be effective. The solutions must be arrived at through scientifically determined causes. Those solutions should embrace the multiple-use concept and take all recognized usage into account.

Pacific Northwest Waterways Association, in representing a wide variety of water uses, would like to participate in the process. We would be happy to bring various users together to help develop solutions to preserve the multiple-use concept and protect the beneficial uses of the river, including the fish.

The Pacific Northwest Waterways Association appreciates this opportunity to present our comments. Thank you.

Senator HATFIELD. Thank you, Mr. Vanselow.

[The statement follows:]

STATEMENT OF GLENN VANSELOW

The Pacific Northwest Waterways Association [PNWA] is a regional association that has been working for 56 years to maintain the multiple use concept in the development and management of the Northwest region's natural resources, including those of the Columbia/Snake River System.

PNWA membership includes 111 organizations and individuals in Oregon, Washington, Idaho, and Northern California. PNWA represents: Public port authorities on the Pacific Coast, Puget Sound, and Columbia/Snake River System; public utility districts, investor owned utilities, and direct service industries; irrigation districts; grain growers, grain grower cooperatives, and upriver elevator companies; and transportation providers, consulting engineers, and other users of the Columbia/Snake River System.

The Pacific Northwest Waterways Association stands firmly behind the multiple use concept for the Columbia/Snake River System. The system was developed and each of the federal projects on the system were authorized for multiple use purposes. Those multiple uses include power generation, flood control, navigation, fish and wildlife, and recreation.

PNWA believes that all uses for which the system was developed must be protected and preserved. We recognize that Columbia River salmon are a valuable resource and a part of the heritage of the Pacific Northwest. PNWA supports continued biological studies to determine the status of the various species of fish in the Columbia and Snake Rivers. PNWA advocates an open process in conducting the biological status review. The process initiated by the National Marine Fisheries Service [NMFS] should be adopted and funded, and NMFS should be given sufficient time to complete the necessary studies.

Two elements of that process are extremely important, in fact, necessary to produce credible results and attain the best scientific information available. PNWA supports NMFS including biologists from outside the agency on an active Technical Advisory Committee and the establishment of a Peer Review Committee of the best available scientists from regional universities. We believe the Bonneville Power Administration, the Pacific Northwest Utilities Conference Committee, Direct Service Industries, Inc., and the Port of Portland have qualified biologists that should be included on the Technical Advisory Committee. It is important that the Peer Review Committee be selected in a manner which provides all users with input to the process, and that both committees truly function and participate in the decision making process.

PNWA is particularly concerned about the process and the selection of the participants. Science, like the Constitution, is open to interpretation and human judgment. No one wants a "packed court" deciding this issue. PNWA is seeking, and the

proposed NMFS process appears to provide, an open and fair process for conducting the biological status review.

We further believe that solutions should not be suggested, recommended, or imposed until after the biological review is completed. Only after the status is determined, only if the best scientific review determines protection is required, and only after the causes are determined, should solutions be developed. Those solutions should be developed embracing the multiple use concept and take all recognized uses into account.

The Pacific Northwest Waterways Association, in representing a wide variety of water users, would like to participate in the process. If it is determined that protection is required, PNWA would be happy to assist. We can bring the various users together to help develop solutions to preserve the multiple use concept and protect the beneficial uses of the river, including the fish.

PNWA appreciates this opportunity to present our comments. Thank you.

STATEMENT OF JOHN ROSHOLT, ATTORNEY, NELSON & ROSHOLT LAW OFFICES, TWIN FALLS, ID

Senator HATFIELD. Mr. Rosholt.

Mr. ROSHOLT. Senator Hatfield, Congressman Wyden, I appreciate very much the invitation to be here. I come from an area of Idaho and represent the Water District No. 1 which extends from down near Twin Falls to the Wyoming border and the Montana border. The district corresponds essentially with the Bureau of Reclamation and to preserve water for approximately 200,000 acres of land, primarily, that we have to irrigate. In that same District, approximately another 1 million acres of land is irrigated through the resource of the Snake River land.

We appreciate being asked here today, and I know that at least our Senator's office was encouraged by the invitation. We feel kind of like the guy who owns the chicken coop but did not get invited to the party for the Easter egg hunt.

We are represented by a great water resources and we use those water resources to develop a strong economy and industry in our State.

But we do appreciate being here. We thought a couple weeks ago that Idaho was on somebody's list. We had the Los Angeles City Council calling us to make water studies. We had the U.S. Supreme Court come down saying that State water rights do not matter. And our friends, the Shoshones, filed the petition on sockeye salmon. All three which, when you are sitting around the pickle barrel, might conjure up some kind of idea that somebody's concerned about our water.

But I do have recollections that—I was appointed by the Power Administration advisory committee in 1967 by Senator Jordan, and I went to my first meetings to find conversations not unlike those that have gone on here today. We maybe have been for some 25 years in somewhat of a vacuum.

And incidentally, I am in private practice, Senator, and I am going to push my daughter into politics. [Laughter.]

When it was mentioned in earlier testimony about let us reestablish some water wells in the Stanley Basin National Recreation Area, there is a willing farmer who will give one-half of his water rights, which is substantial enough to reestablish this run. We end up with five levels of bureaucracy, and the final decision made is that no, you cannot go to a sprinkler system so that you only use one-half as much water because putting in sprinklers against the foreground of the mountains would violate the aesthetics of a Na-

tional fish run. With those kinds of decisions it is highly unlikely we are ever going to get the opportunity to reestablish the fish runs.

I want to make it clear that the farmers do not want to see anadromous fish become extinct.

I live in Twin Falls. Shoshone Falls is about five miles from downtown Twin Falls. That is the natural break. We can only go that far on the Snake River system. We are celebrating our centennial year in a couple days and one of the columns in the paper just last week talked of sockeye salmon filling the river which cuts right through the middle of the city in which I live. When the sockeye came up to spawn, the water was bright red with fish. Those probably can be restored. We want to be there and we want to participate.

You participated in hundreds of hearings on reclamation projects and you heard thousands of times that water is the life blood of the west. It is to mill towns and communities and ways of life. There is going to be no surprise to anyone, I do not think, that if the recovery plan is based solely on going as far as you can, taking all the water you can get and flushing it down through the system, those of us who think that water is some kind of a property right may resist that.

We may not resist it as dramatically as it has been in the past. And I cite another example, and that is that 4 years ago the water users of the upper Snake basin were not invited to the party to negotiate the water and stocking rights of the Shoshone-Bannock Tribes. I am pleased to tell you that after finally forcing our way into that process, because we were the ones that had the water that had to be available to the tribes, to settle the agreement that we think we have an agreement; and we think that while the tribes are within days of signing it, that it now satisfies all Federal and State agencies as well.

We thank you for the chance to be here today. I am sorry personally that we have to call upon the Endangered Species Act to do this deal. In a way it is public recognition we failed to work together, and Idaho is probably as much responsible for that as any other state involved. We saw the Columbia Basin Compact go by the wayside some 25 years ago. At one time I think we all agreed to that compact, and maybe we could have stemmed some of those problems then.

I appreciate your leadership and as a message from the users of the upper Snake River basin, please invite us to the parties. We want to be at the table; we want the process open. We like the idea of the information. We will give you all we have and maybe there are some solutions. May not be ideal, but solutions. Thank you very much.

[The statement follows:]

STATEMENT OF JOHN ROSHOLT

Mr. Chairman and Committee members, I am John Rosholt, an attorney from Twin Falls, Idaho. I would like to offer comment today on behalf of Water District 01 of the upper Snake River Basin regarding the potential listing of Columbia and Snake River salmon pursuant to the Endangered Species Act. I appreciate the opportunity to appear before you and offer these comments on behalf of my clients. I hope that hearings of this nature are a prelude to an open, unbiased, and factual process to which all interested parties will be invited and have access.

Water District 01 is a political subdivision responsible for the measurement of all surface water deliveries within Idaho for the Henry's Fork, South Fork and Main Snake River and its tributaries above Milner Dam near Twin Falls. The District's watermaster coordinates with the Bureau of Reclamation in the delivery of storage water to supplement natural flows. Approximately 1.2 million acres are served in Water District 01. Probably 30,000 farms and 150,000 family farm members are dependent on water delivered in Water District 01. The District corresponds with the Bureau of Reclamation's Minidoka Project. Only Jackson Reservoir and part of the Palisades Reservoir are located in Wyoming. But for 33,000 a/f, all of the water in storage in the Minidoka Project stored in both Idaho and Wyoming is contracted to Idaho waterusers.

I would like to make clear that the farmers whom I represent have no desire to see salmon become extinct. They recognize the contribution our fishery resources make to the quality of life here in the Northwest. However, based on comments being made from a variety of sources, my clients are vitally concerned with the potential listing of salmon as an endangered species and the process by which that may take place.

As you well know, water is the life blood of most of the West. It is often said that there are regular property rights and then there are water rights. This saying reflects the importance and the value water has to those of us who live in the West. No one

recognizes this better or holds it more dearly than the farmer. Many, if not most, of the towns, cities and farms in the West would never have been developed without water. If water is removed, most would cease to exist. Because of water's importance to the West, it should come as no surprise to anyone that threats to take or impair water rights and water resources, from whatever source, are taken seriously.

Briefly stated, our concern is that, in the process to deal with the problems created by the filing of the petitions to list certain salmon stocks under the Endangered Species Act, certain interests will seek to take water from the upper Snake River farmers by promoting such a maneuver as a panacea which solves everyone's problems. It should likewise come as no surprise to anyone that should that occur, the people whom I represent and their friends, families and neighbors would be forced to respond to protect their rights. It is not a matter of choice. They would simply have no option.

However, they have asked me to convey to this group their hope that each of you would make it a personal goal to help find a solution to the problems raised by the filing of these petitions. My clients unanimously pledge their support in helping to identify and address these problems.

As part of that pledge to help and to indicate their interest in participating in the process, my clients have identified several matters that they feel should be incorporated into the listing process. Foremost, it is imperative that an evaluation of the need for listing certain stocks must be done utilizing the best scientific and commercial data. This means that the National Marine Fisheries Service (NMFS) should seek out and obtain that information from all sources including interested parties. It also requires that an evaluation of the need for listing be done in a scientific, forthright, and non-politicized manner. Any status review should be completed in an open and unbiased forum with access by interested parties to the review process and data. It also means that sufficient funding and manpower must be made available to accomplish the job. The ramifications, both legal and social, of doing a poor

job are simply too great to do anything less than the best job possible.

If a status review indicates a listing should be considered, my clients urge that, pursuant to § 4 of the Endangered Species Act, all presently existing measures to protect and enhance anadromous fish be thoroughly reviewed, analyzed, and evaluated prior to implementation of additional measures. Refinement and modification of these existing mechanisms should be considered as a preferred alternative to listing. Analysis of existing measures should include reevaluation of commercial harvest impacts, hatchery operations, and Corps of Engineer policies which currently impose unreasonable flood control responsibility on Snake River reservoirs. These Corps policies, rather than focusing on system-wide flood control and its role in solving anadromous fish problems, prohibit the efficient use of presently available water supplies to move migrating fish. Additional management opportunities for enhancement of the fisheries are available through the Non-Treaty Storage Agreement and the System Operation Review.

My clients feel that existing mechanisms, as well as current funding, should be adequate to maintain and protect anadromous fish if they are wisely used. However, based on past history, interagency rivalries, insufficient regional coordination, and an overall failure to wisely use our present resources are now forcing consideration of the drastic measures called for under the Endangered Species Act. My clients realize that philosophically, calling upon the Endangered Species Act would be public recognition of our collective failure to work together. Practically speaking however, implementation will result in needless and far-reaching detrimental impacts to almost all citizens of the Northwest. These impacts should be avoided.

As a final comment, I believe it is worth noting that, to date, implementation of the Endangered Species Act has involved relatively narrow, geographically isolated situations. It has been relatively easy to apply the Act to specific species and readily identifiable conflicts. The current Spotted Owl situation

highlights the problems raised by geographically broader endangered species situations. I believe we should all recognize that the problems associated with the Spotted Owl will seem minor indeed compared to the efforts that will be necessary if anadromous fish are listed as threatened or endangered. If the Endangered Species Act is approached as the solution to our problem, the § 7 consultation process alone will result in needless delays and waste of human, economic, and natural resources.

My clients urge that a fair and reasonable solution be found within the existing framework of measures designed to protect and enhance anadromous fish stocks. We believe success is possible without the drastic measures required under the Endangered Species Act if clear direction and strong leadership is provided. We would hope that you through your demonstrated interest in this matter, would see that such direction and leadership guides this process. Thank you.

Senator HATFIELD. Thank you very much. You are indeed invited to the party, not only today but I am sure Mr. Schmitten, who talked about wanting all these groups as he moved along the Endangered Species Act, will want regional parties to be represented as well.

Congressman Wyden.

Mr. WYDEN. Senator, thank you. I thank all of you. You have made helpful contributions. No question, the folks from Idaho, we want you to be invited to the party. We want to make sure it is not an unpleasant occasion. I think that is what this wake-up call is all about.

Mr. Wright, let us start with you. Do you share my concern that over the years the direction in fish policy basically has been to get the overall figure, the overall fish production figure up, and in doing that, what happened, the push was on the hatchery side and wild stock got short shift?

Mr. WRIGHT. At least in part I agree with that, that we have paid more attention to numbers of fish, particularly hatchery fish. We have testified from our view to the power council over the last decade from time to time that it is not in our interests just to get fish back at the expense of the wild fish because we know who people are going to turn to if they get excited about wild fish populations going extinct.

I think we have also failed in being judicious about the quality—even in the fish hatcheries, the quality of the fish versus the quantity of fish. And that is an issue that needs to be addressed amongst all the multiple-faceted issues in front of us.

Mr. WYDEN. I appreciate your comments on that.

One last question for you all. You are in a position 5 hours into the hearing where the old saying, "Everything has been said and

almost everybody has said it." You all have avoided that, giving us additional input that is very helpful.

The only other question I had was at least two of you mentioned Marine Fisheries, but nobody mentioned what they thought BPA, Corps, Bureau of Reclamation ought to be doing. I think maybe you were here for our earlier discussion; but I think one of the things I am getting out of this 5-hour session is that in a lot of these areas what has happened is, first, Senator Hatfield has worked very hard for it, gone through it, I think, very painstakingly here today to really do some of these initiatives, particularly when compared to other prospects these agencies have been pursuing.

What would be your counsel to those three agencies, beyond fisheries, other three Federal agencies? Let us go down the row: the Corps, Bonneville, and the Bureau.

Mr. WRIGHT. Basically I had—the answer to your first question, the reason you hear us talking about National Fisheries is that that is where the petition is up before. Basically the other agencies are—there is a program going on as we speak.

Now, one of the great frustrations that I know of the Northwest delegation and particularly Senator Hatfield in trying to get dollars is the bureaucracy system and the compounding of that bureaucracy when you deal between Federal agencies. We have tried to help not hinder that, for instance, in bypass, by strongly supporting the appropriation of those funds.

The Corps will tell you they are paddling as fast as they can to get the design and mechanics implemented. I believe in the context of their system, they are paddling as fast as they can. But somehow there has got to be a way to streamline those systems once we decide to use them. I do not think they are honestly impeding; I just think the system needs a bypass. We share the Corps' concerns. We said we have to put this aside and get these things installed. We do not have an alternative acceptable to us. When we get to that point, there have got to be better ways to streamline the system.

In the case of Bonneville, I do not know of any moneys that were appropriated but not spent other than some of their revenue budget items. The reason behind that is exactly the same as what we are experiencing with Corps, is they could not get through their own system of contracting that money within the fiscal year. Again the people, I think, were trying but the system is so cumbersome you just cannot—sometimes you feel like you cannot get through. So ways of streamlining internal mechanisms of these organizations is critical.

Mr. WYDEN. Gentlemen, for those three agencies, any recommendations about what they ought to do?

Mr. VANSELOW. Well, Congressman, I guess I would say there are relatively few individuals, businesses, and governmental entities that thrive on change.

Mr. WYDEN. Congress, too.

Mr. VANSELOW. We are in the process where it appears that, from what I hear today, that maybe some change is required. My concern is I did not hear definitive solutions that appear to solve the problems. So while, yes, we can go through some of the processes discussed earlier, improve processes 3 months into the process,

and streamline some the processes and do some of the things talked about, I am still concerned whether it is habitat versus flows versus harvests versus other factors.

I am not convinced we know all the answers. My understanding is the process before us is to at least attempt to determine what those solutions are. So I think we need to use alternatives available, at the same time develop alternatives, and be ready for causes—that implication of the causes and be ready for those causes.

Mr. WYDEN. Mr. Rosholt.

Mr. ROSHOLT. I am not sure we have the level of knowledge we need, especially when we put this great power complex together and made Bonneville and we spent billions of dollars to help the fish upstream without an analysis of how to get them back down. Now it is 30 years later and it costs more.

The Bureau of Reclamation almost daily has been very receptive, at least on our part, in dealing with fish problems, not necessarily just anadromous fish problems, but spawn issues, the minimum flow issues, with water quality issues. There are issues in Idaho now being studied as partial solutions to the problem. The Bureau of Reclamation in our State has proposals that may come. Those steps are there. I really do not know that much about the Corps.

Mr. WYDEN. Well, it has been helpful. The consequences of overstudying right now can be very, very great, and Senator Hatfield's proposal gives us a chance to get out and move in a number of areas quickly.

Senator, thank you.

Senator HATFIELD. Thank you. I want to thank you gentlemen and all the other witnesses here today and for those who came to listen. It gave stature to the issue under consideration and it gives an indication of very broad and keen interest.

I suppose that it was due to the notification carried in the media this week that I received a letter in my Portland office from a 13-year-old constituent from Baker City, OR, that I would like to read into the record this morning. It is dated June 21. It is addressed:

Dear Idaho Power: My name is Corey, and my family and I have camped on the Snake River. My sister lives in Redmond, OR, and she is going to be staying with us at our cabin June 28 until July 9. It is disappointing the water is going down, so I wrote this letter to ask if you could possibly raise the water while my sister is here so we can fish off the dock and ski and swim. Thank you. Your friend, Corey, Corey Smith, Baker City.

Perhaps it is on the light touch, but nevertheless I think it illustrates again that there is a public and broad-based concern over the use of our water, our rivers, fish, recreation, power, energy, navigation, irrigation, all multiple uses.

Mr. Wright, I would like to thank you for the very, very statesmanlike attitude today addressing the problem of the fish bypasses which you communicated to your constituency group for playing a part in that effort in the appropriation process.

I would like to also say to each of the witnesses that your testimony is of great importance to this hearing, and other testimony not given I would like to incorporate in the record at this time: Mr. Ted Role's testimony relating to this subject and others will be included as made available to the committee.

I would like to thank Chairman Byrd, Senator from West Virginia, who is the chairman of the Appropriations Committee in the Senate and who authorized this hearing. He has always been very supportive and helpful to anything in our region. I would also like to thank the people of city hall, city of Portland, who have been very helpful in providing these facilities; Brenda Rogers, who has studiously, carefully transcribed the record here today. And I would also like to thank Mark Walker, Ed Warner, Gary Barbour, and Rich Brown who have staffed our hearing.

Congressman Wyden, this has been a delightful partnership today, and I want to express my deep appreciation to you in bringing the important influence of the committee that you are on, the Small Business Committee in the House of Representatives, to this hearing. It has been a pleasure working in tandem with you. I look forward to continuing to address this issue as you and I peruse the record and as activity continues to be engendered both here in the region and in Washington. Are there any further comments?

Mr. WYDEN. Senator, I would just say this has really been a pleasure for me. I would like to thank you for the chance to team up in a fashion which is an ideal way to go after this situation on the river.

As you know, the last few weeks in Washington have been pretty boisterous: the owl being threatened 2 weeks ago, listing last week, the beginning of the recovery plan. I really appreciate the chance to work with you to try to avoid a similar situation in the matter with another wild species. Thank you, Senator Hatfield.

CONCLUSION OF HEARING

Senator HATFIELD. Thank you very much. This hearing is recessed.

[Whereupon, at 1:50 p.m., Saturday, June 30, the hearing was concluded, and the subcommittee was recessed, to reconvene subject to the call of the Chair.]

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37-329 (200)